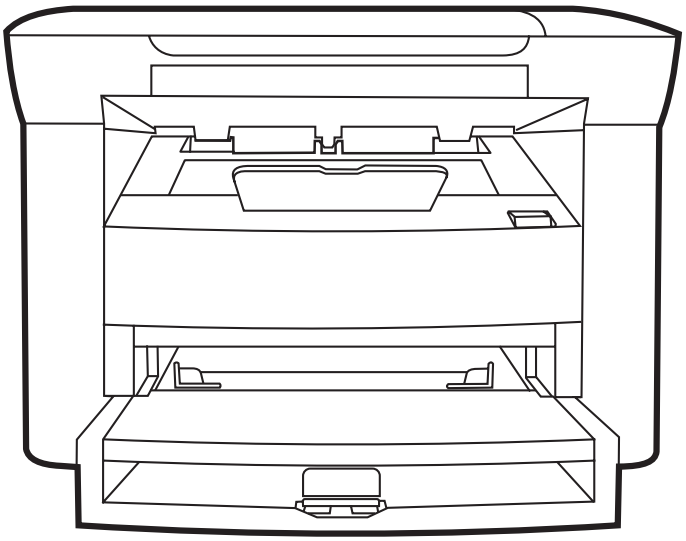
HP LaserJet M1120 MFP Series

Service Manual



HP LaserJet M1120 MFP Series
Service Manual

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1 Product information

- Quick access to product information
- Product comparison
- Product features
- Product walkaround
- Software description
- Software for Windows
- Software for Macintosh
- Uninstall software
- Media specifications

Quick access to product information

Use the following Web site to find information about the product.

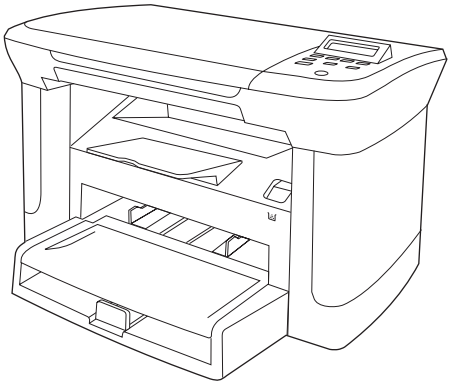
- www.hp.com/support/LJM1120

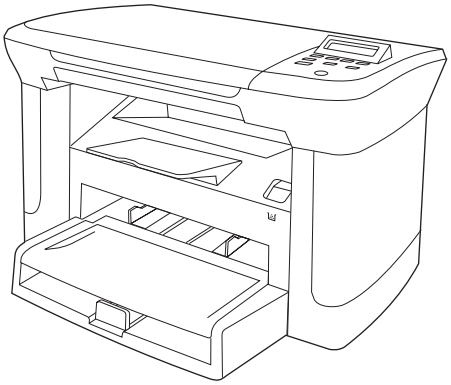
Table 1-1 Product guides

Guide	Description
HP LaserJet M1120 MFP Getting Started Guide	Provides step-by-step instructions for installing and setting up the product.
HP LaserJet M1120 MFP Series User Guide	Provides detailed information for using the product and problem-solving. Available on the product CD or in **Program Group** if the software is installed on a computer.
Online Help	Provides information about options that are available in the printer drivers. To view a Help file, open the online Help through the printer driver.

Product comparison

The product is available in the following configurations.





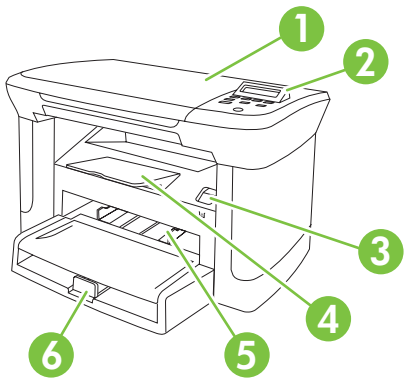
Base models	Network models
• Print letter-size pages at speeds up to 20 pages per minute (ppm) and A4-size pages at speeds up to 19 ppm. • Priority input tray holds up to 10 sheets of print media. • Tray 1 holds up to 250 sheets of print media or 10 envelopes. • Manual two-sided (duplex) printing and copying. • Hi-Speed USB 2.0 port. • 32-megabyte (MB) random-access memory (RAM). • Flatbed scanner.	Base model, plus: • 10/100 Base-T Ethernet network port. • IPv4 network protocol. • IPv6 network protocol.

Product features

Print	• Prints letter-size pages at speeds up to 20 ppm and A4-size pages at speeds up to 19 ppm. • Prints at 600 dots per inch (dpi) and FastRes 1200 dpi. • Includes adjustable settings to optimize print quality.
Copy	• Copies at 300 dots per inch (dpi).
Memory	• Includes 32 MB RAM.
Paper handling	• Priority input tray holds up to 10 pages. • Tray 1 holds up to 250 sheets of print media or 10 envelopes. • Output bin holds up to 100 sheets of print media.
Scan	• Provides 1200 pixels per inch (ppi) full-color scanning.
Printer driver features	• FastRes 1200 produces 1200-dots-per-inch (dpi) print quality for fast, high-quality printing of business text and graphics.
Interface connections	• All models include a Hi-Speed USB 2.0 port. • Network models include a 10/100 Base-T Ethernet network port.
Economical printing	• Provides N-up printing (printing more than one page on a sheet). • Provides an EconoMode setting, which uses less toner.
Supplies	• Uses a print cartridge that has a no-shake design. • The product ships with a 1,000-page (average yield) starter cartridge. The average yield for replacement cartridges is 2,000 pages.
Accessibility	• Online user guide is compatible with text screen-readers. • Print cartridges can be installed and removed by using one hand. • All doors and covers can be opened by using one hand.

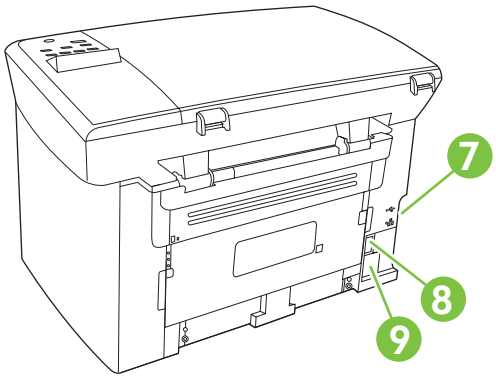
Product walkaround

Front view



1	Scanner lid
2	Control panel
3	Print-cartridge door latch
4	Output bin
5	Priority input tray
6	Tray 1

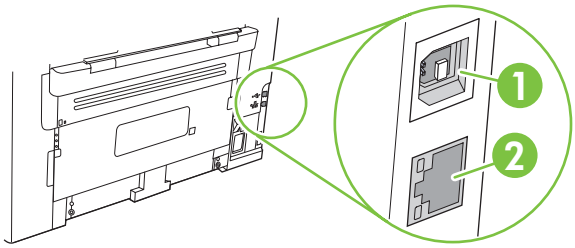
Back view



7	Interface ports
8	Power switch
9	Power connector

Interface ports

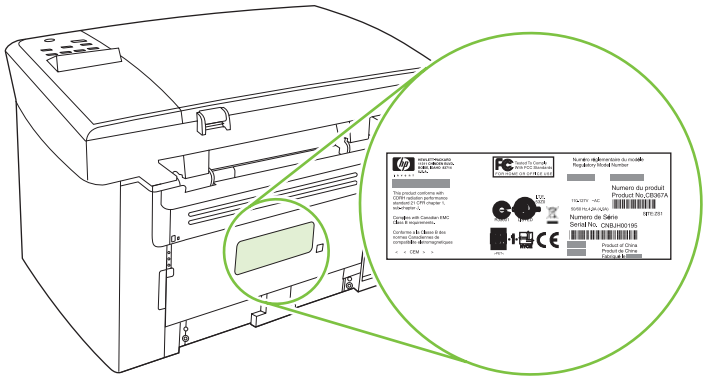
All models have a Hi-Speed USB 2.0 port, and network models also have a 10/100 Base-T Ethernet port.



1	Hi-Speed USB 2.0 port
2	Ethernet port (network models only)

Serial number and model number location

The serial number and product model number label is on the rear of the product.



Software description

Supported operating systems

The product supports the following operating systems:

Full software installation

- Windows XP (32-bit)
- Windows Vista (32-bit)
- Windows 2000
- Windows 2003 Server (32-bit)
- Mac OS X v10.3, v10.4, and later

Print and scan drivers only

- Windows XP (64-bit)
- Windows Vista (64-bit)
- Windows 2003 Server (64-bit)

NOTE: For Mac OS X v10.4 and later, PPC and Intel Core Processor Macs are supported.

Supported printer drivers

The product comes with software for Windows and Macintosh that allows the computer to communicate with the product. This software is called a printer driver. Printer drivers provide access to product features, such as printing on custom-sized paper, resizing documents, and inserting watermarks.

NOTE: The most recent drivers are available at www.hp.com/support/LJM1120. Depending on the configuration of Windows-based computers, the installation program for the product software automatically checks the computer for Internet access in order to obtain the latest drivers.

Software included with the product

There are several options for completing a recommended install. Easy installation will complete the installation with default settings. Advanced installation allows you to review the license agreements and the default settings.

Easy installation for Windows

- HP drivers
  - Printer driver
  - Scan driver
- HP MFP software
  - HP LaserJet Scan program
  - Uninstall program
- HP Update program
- HP Customer Participation program

- Shop for HP Supplies program
- Other programs
    - Readiris OCR (not installed with other software; separate installation is required)

Advanced installation

Advanced installation includes all of the features that are available with the easy installation. The HP Customer Participation program is optional.

Macintosh software

- HP Product Setup Assistant
- HP Uninstaller
- HP LaserJet software
    - HP Scan
    - HP Director
    - Scan to e-mail program
    - HP Photosmart

Software for Windows

Embedded Web server (network models only)

Network models are equipped with an embedded Web server, which provides access to information about device and network activities. This information appears in a Web browser, such as Microsoft Internet Explorer, Netscape Navigator, Apple Safari, or Firefox.

The embedded Web server resides on the device. It is not loaded on a network server.

The embedded Web server provides an interface to the device that anyone who has a network-connected computer and a standard Web browser can use. No special software is installed or configured, but you must have a supported Web browser on your computer. To gain access to the embedded Web server, type the IP address for the device in the address line of the browser. (To find the IP address, print a configuration page.)

Status Alerts software

The Status Alerts software provides information about the current status of the product.

The software also provides pop-up alerts when certain events occur, such as an empty tray or a problem with the product. The alert includes information about solving the problem.

Other Windows components and utilities

- Software installer — automates the printing system installation
- Online Web registration

Software for Macintosh

Embedded Web server (network models only)

Network models are equipped with an embedded Web server, which provides access to information about device and network activities. This information appears in a Web browser, such as Microsoft Internet Explorer, Netscape Navigator, Apple Safari, or Firefox.

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The embedded Web server provides an interface to the device that anyone who has a network-connected computer and a standard Web browser can use. No special software is installed or configured, but you must have a supported Web browser on your computer. To gain access to the embedded Web server, type the IP address for the device in the address line of the browser. (To find the IP address, print a configuration page.)

HP Director

HP Director is a software program for working with documents. HP Director appears on the computer screen to initiate scanning, or to change settings on the product through Macintosh Configure Device.

Also included is the HP product Setup Assistant, which sets up the print queue.

Uninstall software

Windows

1. Click **Start**, and then click **All Programs**.
2. Click **HP**, and then click **HP LaserJet M1120**.
3. Click **Uninstall**, and then follow the onscreen instructions to remove the software.

Macintosh

To remove the software, drag the PPD files to the trash can.

Media specifications

Supported paper and print media sizes

This product supports a number of paper sizes, and it adapts to various media.

NOTE: To obtain best print results, select the appropriate paper size and type in the print driver before printing.

Table 1-2 Supported paper and print media sizes

Size	Dimensions	Priority input tray	Tray 1
Letter	216 x 279 mm (8.5 x 11 in)	✔	✔
Legal	216 x 356 mm (8.5 x 14 in)	✔	✔
A4	210 x 297 mm (8.27 x 11.69 in)	✔	✔
Executive	184 x 267 mm (7.24 x 10.51 in)	✔	✔
A3	297 x 420 mm (11.69 x 16.54 in)		
A5	148 x 210 mm (5.83 x 8.27 in)	✔	✔
A6	105 x 148 mm (4.13 x 5.83 in)	✔	✔
B5 (JIS)	182 x 257 mm (7.17 x 10.12 in)	✔	✔
16k	197 x 273 mm (7.75 x 10.75 in)	✔	✔
16k	195 x 270 mm (7.7 x 10.6 in)	✔	✔
16k	184 x 260 mm (7.25 x 10.25 in)	✔	✔
8.5 x 13	216 x 330 mm (8.5 x 13 in)	✔	✔
4 x 6[1]	107 x 152 mm (4 x 6 in)	✔	✔
5 x 8[1]	127 x 203 mm (5 x 8 in)	✔	✔
10 x 15 cm[1]	100 x 150 mm (3.9 x 5.9 in)	✔	✔
Custom	**Priority input tray**: Minimum—76 x 127 mm (3 x 5 in); Maximum—216 x 356 mm (8.5 x 14 in)	✔	✔

[1] These sizes are supported as custom sizes.

Table 1-3 Supported envelopes and postcards

Size	Dimensions	Priority input tray	Tray 1
Envelope #10	105 x 241 mm (4.13 x 9.49 in)	✔	✔
Envelope DL	110 x 220 mm (4.33 x 8.66 in)	✔	✔

Table 1-3 Supported envelopes and postcards (continued)

Size	Dimensions	Priority input tray	Tray 1
Envelope C5	162 x 229 mm (6.93 x 9.84 in)	✔	✔
Envelope B5	176 x 250 mm (6.7 x 9.8 in)	✔	✔
Envelope Monarch	98 x 191 mm (3.9 x 7.5 in)	✔	✔
Postcard	100 x 148 mm (3.94 x 5.83 in)	✔	✔
Double postcard	148 x 200 mm (5.83 x 7.87 in)	✔	✔

Supported paper types and tray capacity

This product has the following tray priority for feeding print media:

1. Priority input tray
2. Tray 1

Minimum media dimensions are 76 x 127 mm (3 x 5 in).

Maximum media dimensions are 216 x 356 mm (8.5 x 14 in).

To obtain the best print results, change the paper size and paper type settings in the printer driver before printing.

Table 1-4 Supported paper types and tray capacity

Type is	Media specifications	Priority input tray	Tray 1 capacity[1]
Plain Color Preprinted Prepunched Recycled	75 g/m² (20 lb) to 104 g/m² (27 lb)	Up to 10 sheets	Up to 250 sheets
Light	60 g/m² (16 lb) to 75 g/m² (20 lb)	Up to 10 sheets	Up to 260 sheets
Envelopes	Less than 90 g/m² (24 lb)	1 envelope	Up to 10 envelopes.
Labels	Standard	1 sheet	Not supported.
Bond	75 g/m² (20 lb) to 104 g/m² (27 lb)	1 sheet	Up to 250 sheets
Rough	75 g/m² (20 lb) to 104 g/m² (27 lb)	1 sheet	Up to 200 sheets
Transparencies	4 mm (0.1 in) Monochrome Overhead	1 sheet	Up to 200 sheets.
Heavy	110 g/m² (29 lb) to 125 g/m² (33 lb)	Up to 10 sheets	Not supported.
Letterhead	75 g/m² (20 lb) to 104 g/m² (27 lb)	Up to 10 sheets	Up to 250 sheets

[1] The maximum stack height for tray 1 is 25 mm (1 inch).

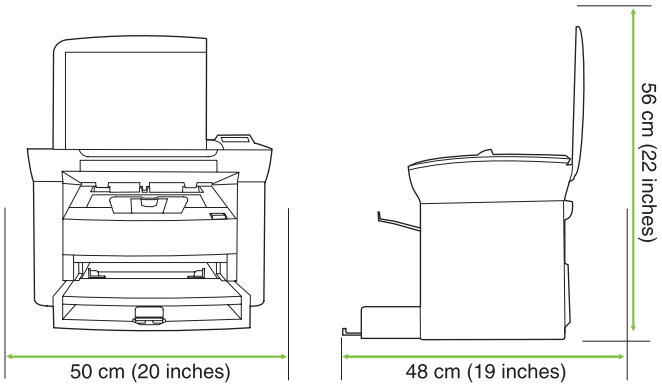
2 Installation

- Site preparations
- What was in the box
- Install input devices
- Install supplies

Site preparations

Operating environment

Place the product on a sturdy, level surface in a well-ventilated area. Make sure that the air vents are not blocked and that the product is installed away from direct sunlight, open flames, and ammonia fumes.



Store or install the product in an area that meets the following requirements:

- Temperature (printer; operating) 15º to 32.5º C (59º to 90.5º F)
- Temperature (printer; storage) -20º to 60ºC (-4º to 140ºF)
- Humidity (printer; operating) 10% to 80% relative humidity (no condensation)
- Humidity (printer; storage) 10% to 90% relative humidity (no condensation)
- Temperature (toner cartridge; storage) -20º to 40º C (-4º to 104º F)
- Humidity (toner cartridge; storage) 10% to 90% relative humidity (no condensation)

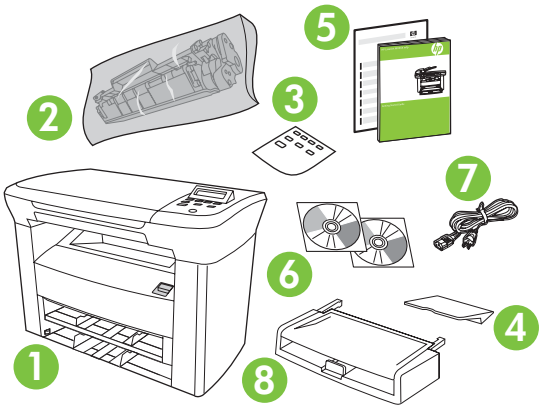
Minimum system requirements

- Windows® 2000
- Windows XP
- Windows Server 2003
- Windows Vista
- Mac OS X v10.3 and later
- 128 MB RAM for Windows operating systems
- 32 MB RAM for Macintosh operating systems
- 250 MB hard-disk space (full installation)
- CD-ROM drive
- USB port

What was in the box

The following components are included in the box.

NOTE: The USB and network cables are not included.

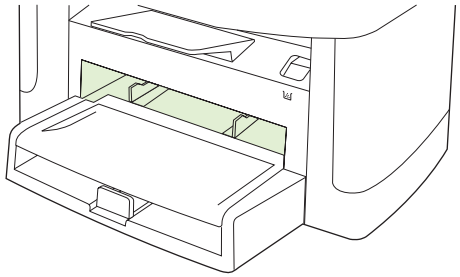


Item	Description
1	HP LaserJet M1120 MFP
2	Print cartridge
3	Control-panel faceplate (if not already installed)
4	Output bin extension
5	Start guide and support flyer
6	CD-ROMs (software and online user guide)
7	Power cord
8	Tray 1

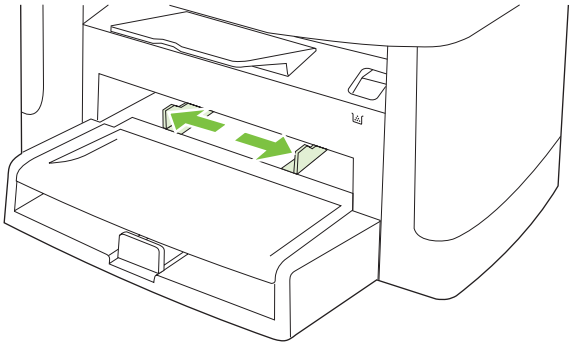
Install input devices

Priority input tray

The priority input tray is accessed from the front of the product. The product prints from the priority input tray before attempting to print from tray 1.

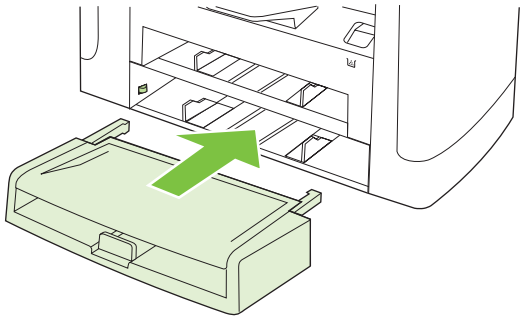


Media guides ensure that the media is correctly fed into the product and that the print is not skewed (crooked on the media). When loading media, adjust the media guides to match the width of the media that you are using.

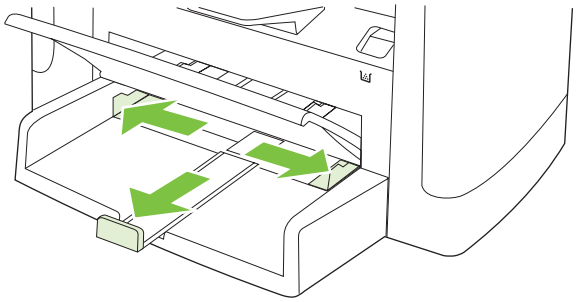


Tray 1

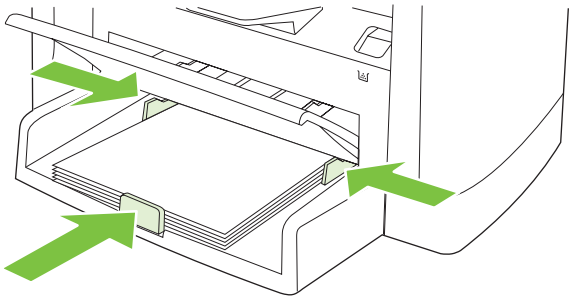
1. Push tray 1 into the product.



2. Open the tray cover, and then adjust the media guides out.



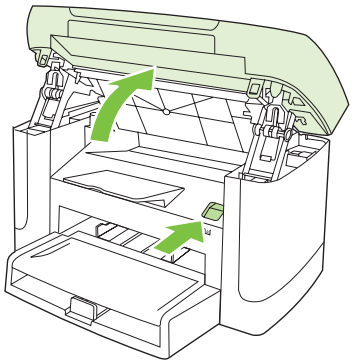
3. Load the paper in the tray, snug the media guides against the stack, and then close the tray cover.



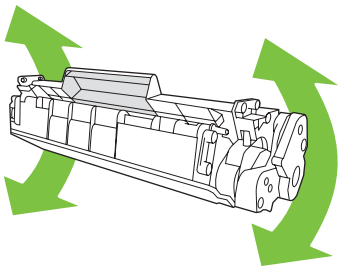
Install supplies

Install the print cartridge

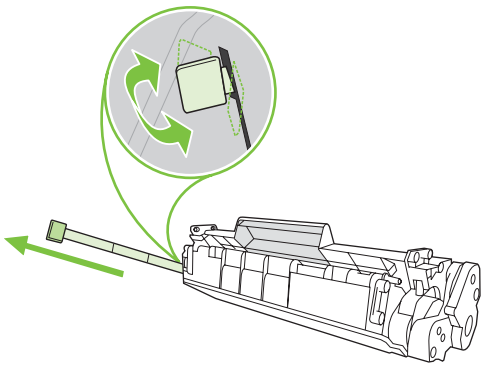
1. Open the print-cartridge door.



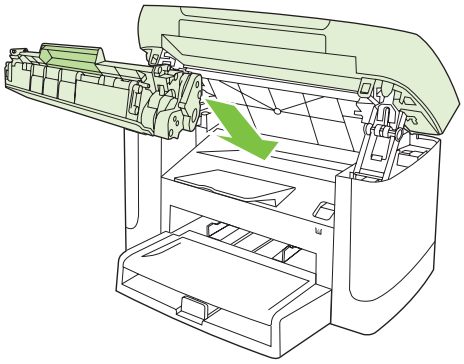
2. Remove the new print cartridge from its packaging, and then rock the print cartridge back and forth.



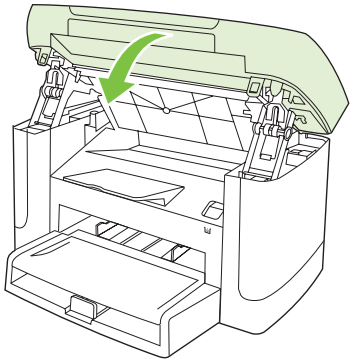
3. Remove the orange cover from the print cartridge, and then pull the orange tab straight out to remove the sealing tape.



4. Insert the cartridge into the product until it is firmly in place.



5. Close the print-cartridge door.



3 Maintenance

- Manage supplies
- Clean the product
- Management tools

Manage supplies

Inspect any parts that wear when servicing the product. Replace them as needed, based on failure or wear rather than usage.

The following table lists approximate schedules for replacing consumables.

Life expectancies of supplies

Item	Capacity
HP LaserJet M1120 MFP Series	Recommended maximum of 3,000 pages per month
Print cartridge	2,000 pages[1] (standard)

[1] For information about the yield for the cartridges, see www.hp.com/go/pageyield. Actual yield depends on specific use.

Check and order supplies

Hewlett-Packard recommends that you place an order for a replacement print cartridge when the Low message for a print cartridge first appears. Use a new, authentic HP print cartridge to obtain the following types of supplies information:

- Amount of cartridge life remaining
- Estimated number of pages remaining
- Number of pages printed
- Other supplies information

Store supplies

Follow these guidelines for storing print cartridges:

- Do not remove the print cartridge from its package until you are ready to use it.

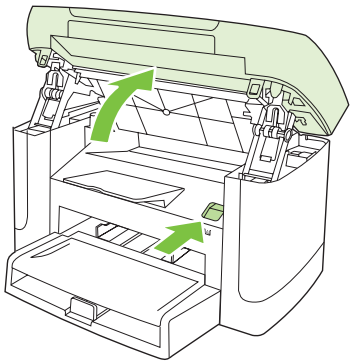
△ **CAUTION:** To prevent damage, do not expose the print cartridge to light for more than a few minutes.

- See Environmental specifications on page 187 for operating and storage temperature ranges.
- Store the supply in a horizontal position.
- Store the supply in a dark, dry location away from heat and magnetic sources.

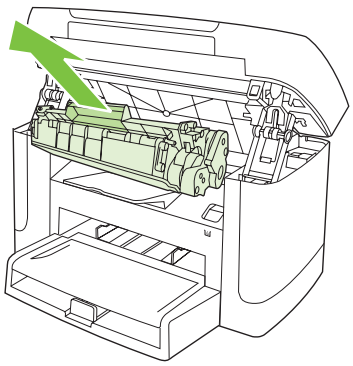
Replace supplies

Print cartridge

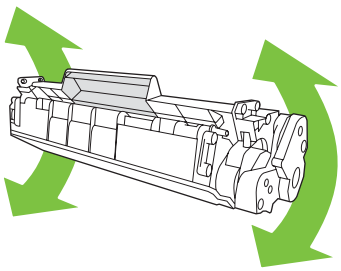
1. Open the print-cartridge door.



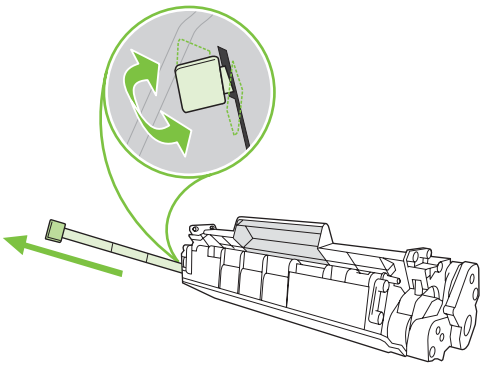
2. Grasp the handle on the print cartridge, and then pull the cartridge straight out to remove it. See the recycling information inside the print cartridge box.



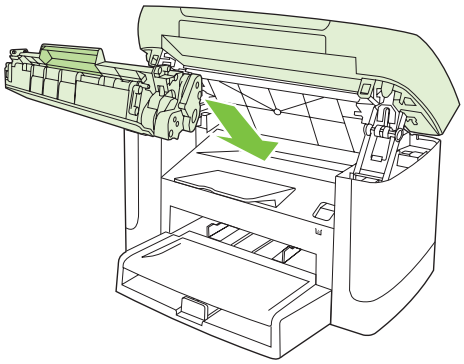
3. Remove the new print cartridge from its packaging, and then rock the print cartridge back and forth.



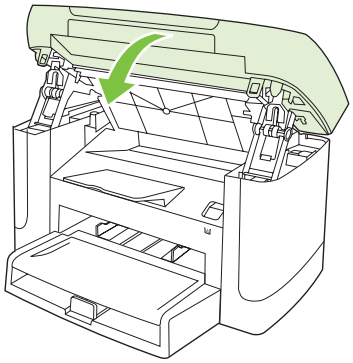
4. Remove the orange cover from the print cartridge, and then pull the orange tab straight out to remove the sealing tape.



5. Insert the cartridge into the product until it is *firmly* in place.



6. Close the print-cartridge door.



△ **CAUTION:** If toner gets on any clothing, wipe it off with a dry cloth and wash the clothing in cold water. *Hot water sets toner into the fabric*.

HP policy on non-HP supplies

Hewlett-Packard Company cannot recommend the use of non-HP supplies, either new or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality. Service or repairs required as a result of using a non-HP supply will *not* be covered under the warranty.

HP fraud hotline

Call the HP fraud hotline if the product indicates that the print cartridge is not an HP print cartridge and you think that it is genuine. HP will help determine if the product is genuine and take steps to resolve the problem.

The print cartridge might not be a genuine HP one if you notice the following issues:

- You are experiencing a large number of problems with the print cartridge.
- The print cartridge does not look like it usually does (for example, the pull tab or the box is different).

In the United States, call toll-free: 1-877-219-3183.

Outside the United States, you can call collect. Dial the operator and ask to place a collect call to this telephone number: 1-770-263-4745. If you do not speak English, a representative at the HP fraud hotline who speaks your language will assist you. Or, if someone who speaks your language is not available, a language line interpreter will connect approximately one minute after the beginning of the call. The language line interpreter is a service that will translate between you and the representative for the HP fraud hotline.

Clean the product

Clean the exterior

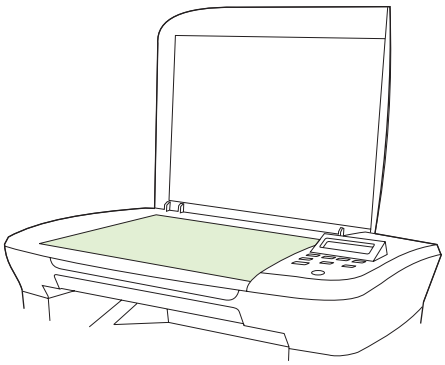
Use a soft, damp, lint-free cloth to wipe dust, smudges, and stains off of the exterior of the product.

Clean the flatbed scanner glass

Dirty glass, from fingerprints, smudges, hair, and so on, slows down performance and affects the accuracy of special features such as fit-to-page and copy.

1. Turn off the product, unplug the power cord from the electrical outlet, and raise the scanner cover.
2. Clean the glass by using a soft cloth or sponge that has been moistened with nonabrasive glass cleaner.

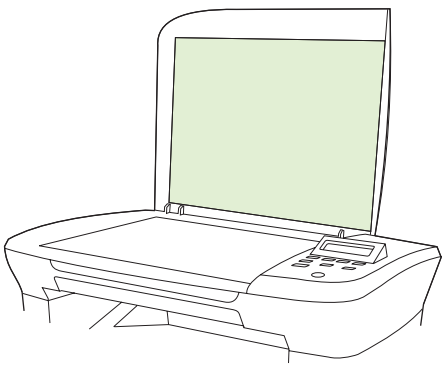
△ **CAUTION:** Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the product; these can damage the product. Do not place liquids directly on the glass. They might seep under it and damage the product.



Clean the lid backing

Minor debris can accumulate on the white document lid backing that is located underneath the product lid.

1. Turn off the product, unplug the power cord, and raise the lid.
2. Clean the white document lid backing by using a soft cloth or sponge that has been moistened with a mild soap and warm water. Wash the backing gently to loosen debris; do not scrub the backing.



3. Dry the backing by using a chamois or soft cloth.

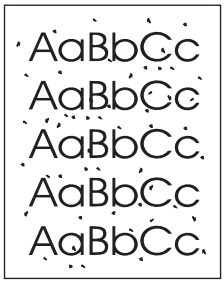
△ **CAUTION:** Do not use paper-based wipes because they might scratch the backing.

4. If this does not clean the backing well enough, repeat the previous steps and use isopropyl alcohol to dampen the cloth or sponge, and then wipe the backing thoroughly with a damp cloth to remove any residual alcohol.

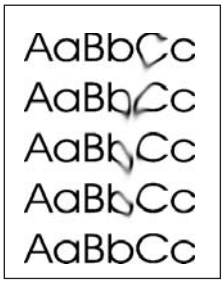
Clean the paper path

During the printing process, paper, toner, and dust particles can accumulate inside the product. Over time, this buildup can cause print-quality problems such as toner specks or smearing. This product has a cleaning mode that can correct and prevent these types of problems.

Specks



Smearing



1. Press Setup.
2. Use the arrow buttons to find the **Service** menu, and then press OK.
3. Use the arrow buttons to find **Cleaning mode**, and then press OK.
4. Load plain letter or A4 paper when you are prompted.
5. Press OK again to confirm and begin the cleaning process.

   A page feeds through the product slowly. Discard the page when the process is completed.

Management tools

Information pages

Information pages reside within the product memory. These pages help diagnose and solve problems with the product.

NOTE: If the product language was not correctly set during installation, you can set the language manually so the information pages print in one of the supported languages. Change the language by using the **System setup** menu on the control panel or the embedded Web server (network models only).

Page description	How to print the page
Demo page Contains examples of text and graphics.	1. On the product control panel, press Setup. 2. Use the arrow buttons to select **Reports**, and then press OK. 3. Use the arrow buttons to select **Demo page**, and then press OK.
Menu map Shows the control-panel menus and available settings.	1. On the product control panel, press Setup. 2. Use the arrow buttons to select **Reports**, and then press OK. 3. Use the arrow buttons to select **Menu structure**, and then press OK.
Configuration page Shows the current settings and product properties.	1. On the product control panel, press Setup. 2. Use the arrow buttons to select **Reports**, and then press OK. 3. Use the arrow buttons to select **Config report**, and then press OK.

Embedded Web server

This product is equipped with an embedded Web server (EWS), which provides access to information about product and network activities. A Web server provides an environment in which web programs may run, much in the same way that an operating system, such as Windows, provides an environment for programs to run on a computer. The output from these programs can then be displayed by a Web browser, such as Microsoft Internet Explorer, Safari, or Netscape Navigator.

An “embedded” Web server resides on a hardware device (such as an HP LaserJet product) or in firmware, rather than as software that is loaded on a network server.

The advantage of an EWS is that it provides an interface to the product that anyone with a network-connected product and computer can use. There is no special software to install or configure, but you must have a supported Web browser on the computer. To gain access to the EWS, type the IP address for the product in the address line of the browser. (To find the IP address, print a configuration page.)

NOTE: For Macintosh operating systems, you can use the EWS over a USB connection after installing the Macintosh software included with the product.

Features

The EWS allows you to view product and network status and manage printing functions from a computer. With the EWS, you can complete the following tasks:

- View product status information
- Determine the remaining life on all supplies and order new ones
- View and change part of the product configuration
- View and print some internal pages
- Select the language in which to display the EWS pages
- View and change network configuration
- Set, change, or clear the product security password

NOTE: Changing network settings in the EWS might disable some of product software or features.

4 Operational theory

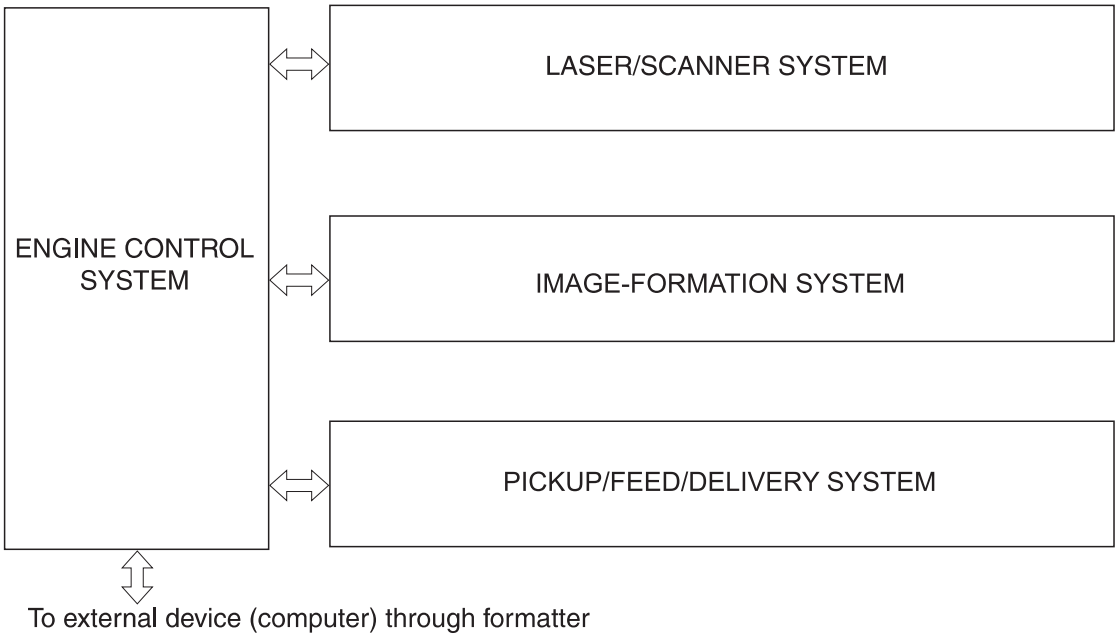
- Basic operation
- Scanner functions and operation
- Internal components (base unit)
- Engine control system
- Laser/scanner system
- Pickup/feed/delivery system
- Image-formation system

Basic operation

This chapter presents an overview of the relationships between major components in the product, and includes a detailed discussion of the image-formation system. The following systems are discussed:

- Engine control system
- Laser/scanner system
- Pickup/feed/delivery system
- Image-formation system

Figure 4-1 System block diagram



Sequence of operation for the base unit

Operational sequences are controlled by the microprocessor on the DC controller.

Table 4-1 Sequence of operation

Name	Timing	Purpose
WAIT	From power-on until the end of the main-motor initial drive	Detects the presence of a print cartridge; clears potential from the drum surface and cleans the transfer roller
STBY (standby)	From the end of the WAIT or LSTR period until either a print command is sent from the formatter or the power is turned off	Prepares the product to receive print commands
INTR (initial rotation)	From the time of the print command until the pickup solenoid is turned on	Prepares the photosensitive drum for printing

Table 4-1 Sequence of operation (continued)

Name	Timing	Purpose
PRINT	From the end of the INTR period until the primary high-voltage is turned off	Forms the image on the photosensitive drum and transfers the toner image to the media
LSTR (last rotation)	From the end of the PRINT period (when high-voltage is turned off) until the main motor stops rotating	Delivers the last page of a print job After LSTR, the product either returns to STBY or, if another print command was sent from the formatter, enters INTR.

Table 4-2 Power-on sequence

Step	Action
1	Power-on
2	CPU initialization
3	Start video interface communication
4	Check sensors for residual media
5	Main motor initial drive
6	Fuser heater initial drive. The fuser heater reaches a surface temperature of 100° C.
7	Laser/scanner motor initial drive
8	High-voltage control Detect presence of a print cartridge Clean the transfer roller after the primary charging AC bias is turned on
9	Failure/abnormality check: detect laser/scanner failure, fuser failure, and open covers
10	Communication with the memory tag

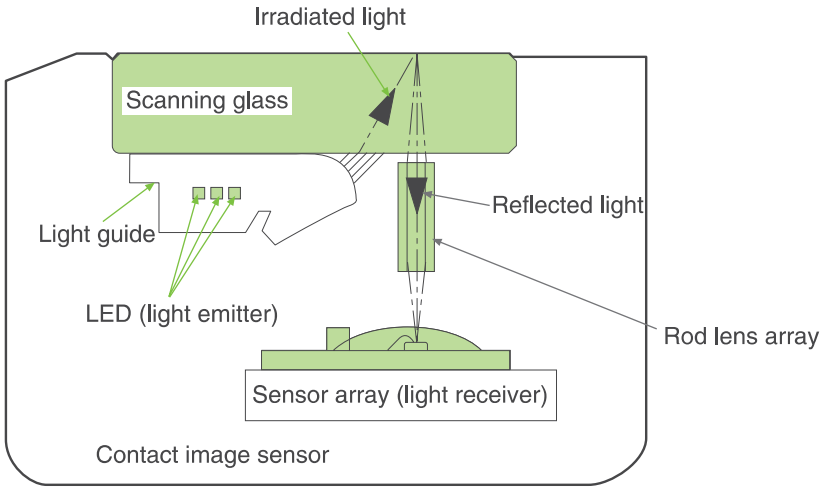
Scanner functions and operation

The following sections describe how the document scanner functions.

Scanner functions

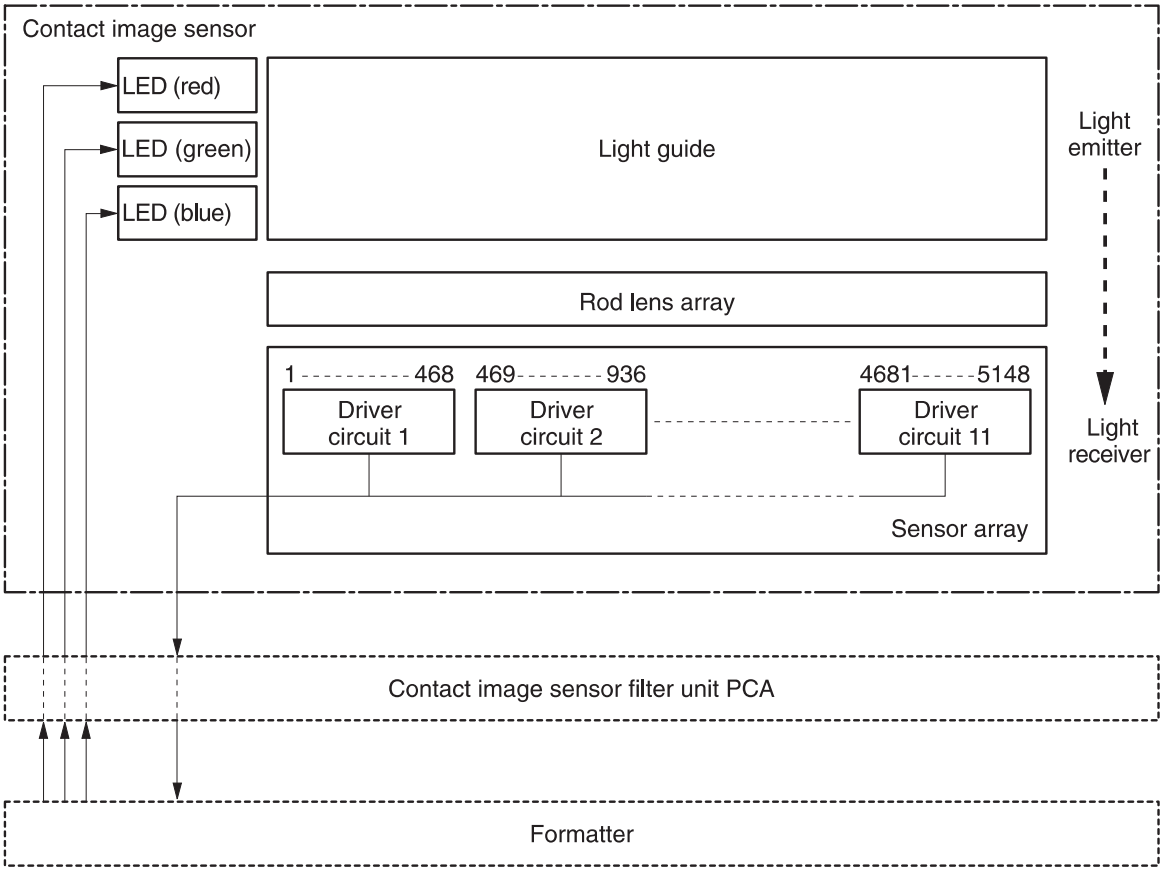
The contact image sensor (CIS) is the major component of the optical scanning system. The CIS consists of three LEDs (red, green, and blue), a light guide, the scanning glass, the rod lens array, and a sensor array. When the CIS scans a document, the CIS moves and the paper is stationary.

Figure 4-2 Optical system (1 of 2)



The formatter controls the CIS. To begin scanning, the formatter sends a signal to the CIS. The LEDs illuminate and the light passes through the light guide and scanning glass and strikes the document. Light that the document reflects passes back through the scanning glass and rod lens array into the sensor array. The sensor array consists of 5,148 photosensors (468 photosensors on each of 11 sensor driver circuits). The sensor array collects and amplifies the reflected light and converts it into serial data in the driver circuits. The CIS sends the data to the formatter for image formation.

Figure 4-3 Optical system (2 of 2)

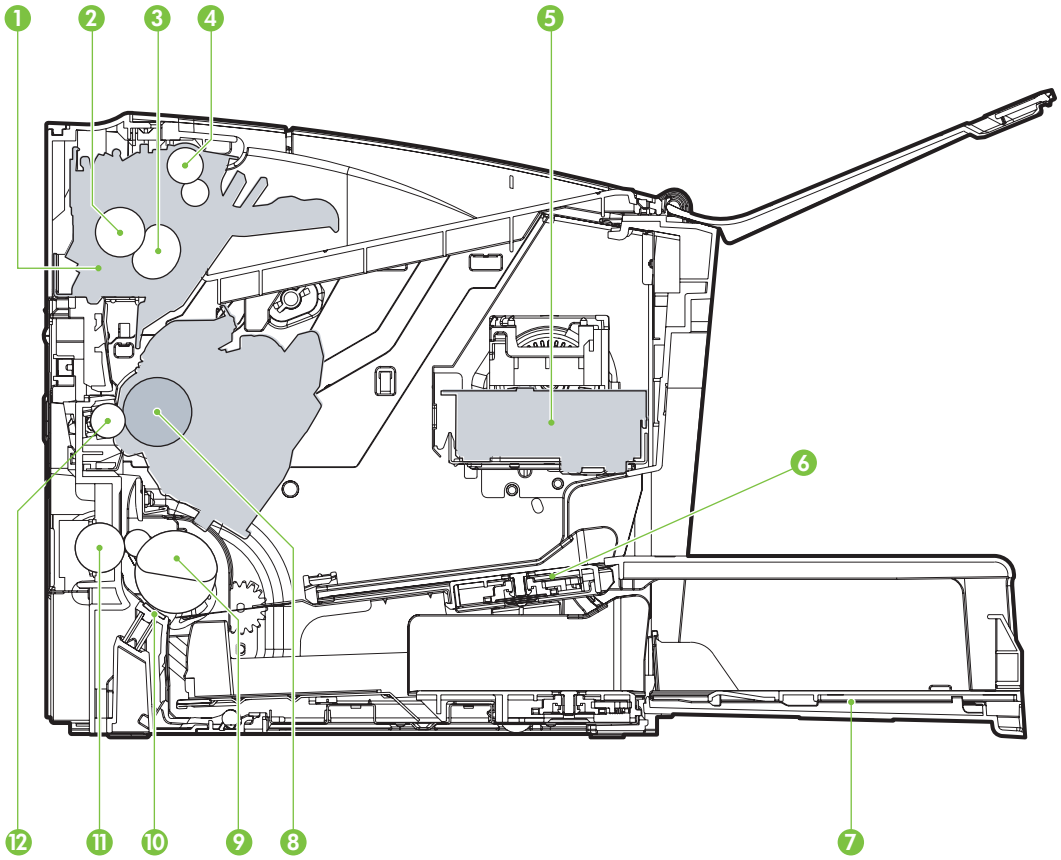


Scanner operation

At startup and periodically at other times, the scanner assembly moves systematically to locate its home position. It then calibrates to a white strip located under the glass at the right end of the scan tub.

Internal components (base unit)

Figure 4-4 Cross-section of printer



1	Fuser unit
2	Pressure roller
3	Fuser sleeve
4	Delivery roller
5	Laser/scanner unit
6	Single-sheet-feed slot
7	Multi-purpose tray
8	Photosensitive drum
9	Pickup roller
10	Separation pad
11	Feed roller
12	Transfer roller

Engine control system

The engine control system coordinates all of the product functions, according to commands sent from the formatter. It drives the laser/scanner system, the image-formation system, and the pickup/feed/delivery system.

The engine control system contains the following components:

- DC controller
- Low-voltage power supply
- High-voltage power supply
- Fusing control

Figure 4-5 Engine control system

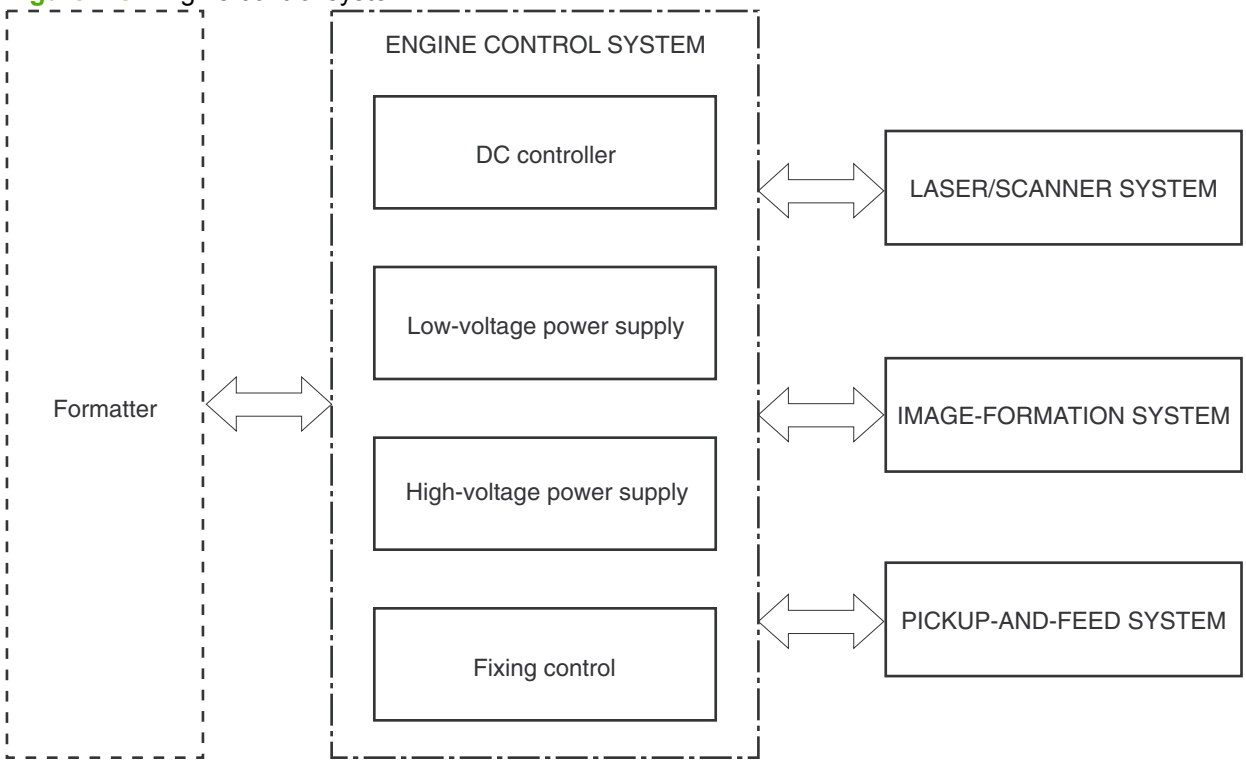
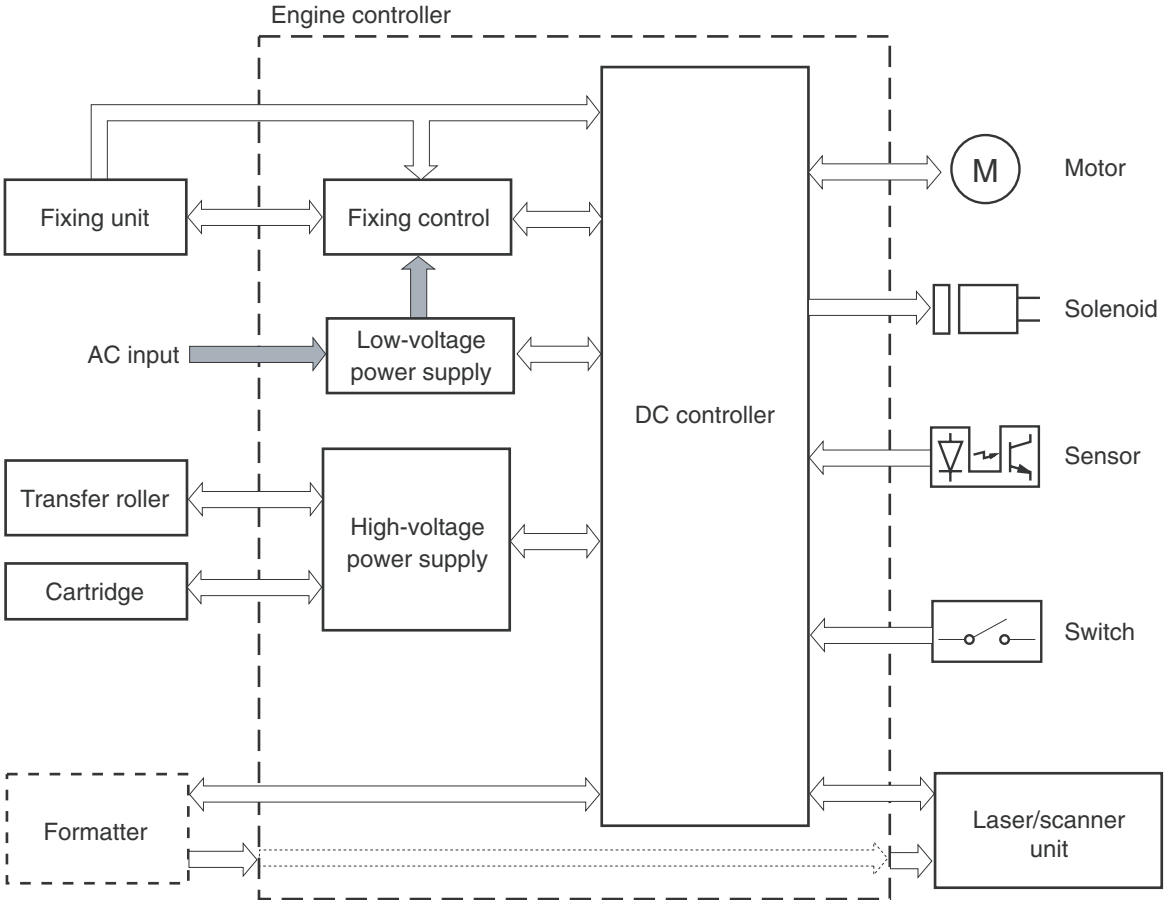


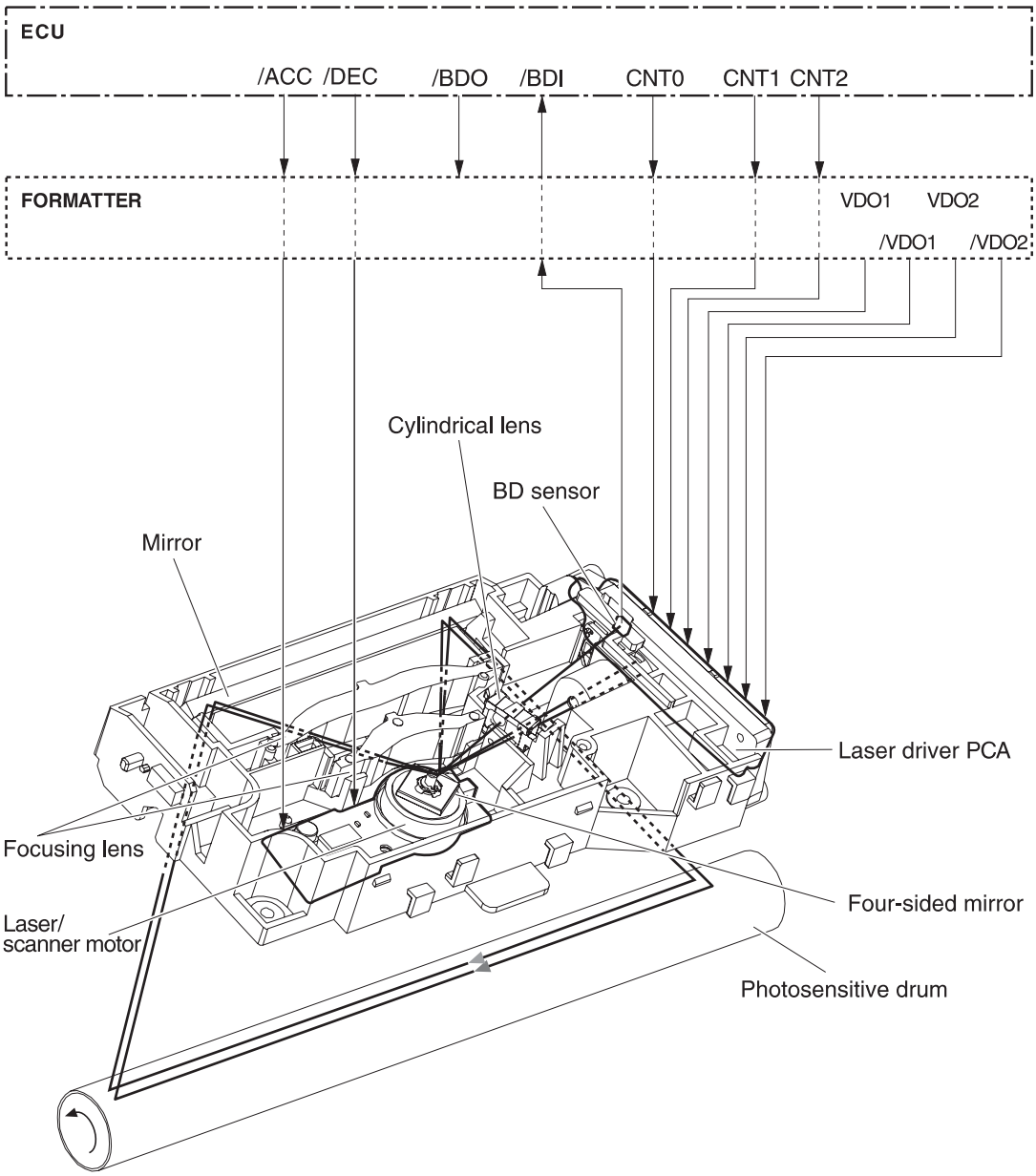
Figure 4-6 Engine-control-system circuit diagram



Laser/scanner system

The laser/scanner system receives video signals from the DC controller and the formatter, and then converts the signals into latent images on the photosensitive drum.

Figure 4-7 Laser/scanner system



Pickup/feed/delivery system

The pickup/feed/delivery system consists of several types of feed rollers and sensors. The DC controller uses two motors and two solenoids to drive the rollers. Three media-detection sensors detect media as it passes through the printer. If media does not reach or pass each sensor within a specified time period, the DC controller determines that a jam has occurred and alerts the formatter.

The following components are identified in Figure 4-8 Pickup/feed/delivery system on page 42:

- M1, main motor
- SL1, pickup solenoid
- PS701, fuser-delivery sensor
- PS702, media-width sensor
- PS751, top-of-page sensor

Figure 4-8 Pickup/feed/delivery system

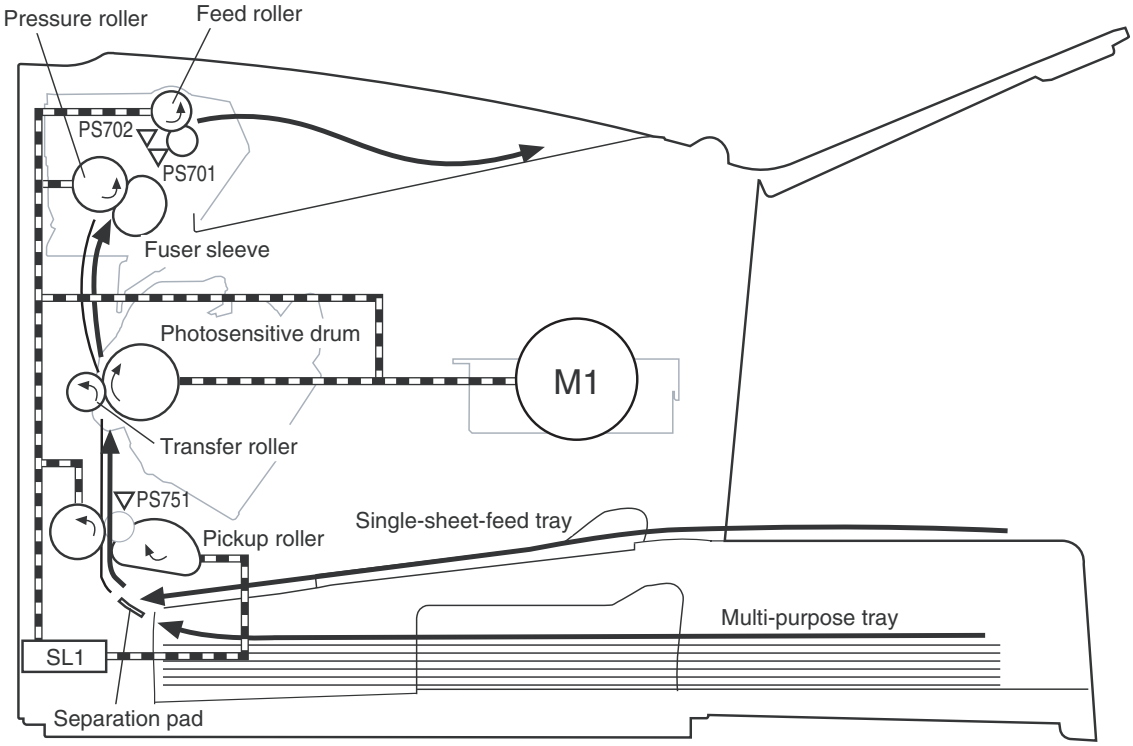


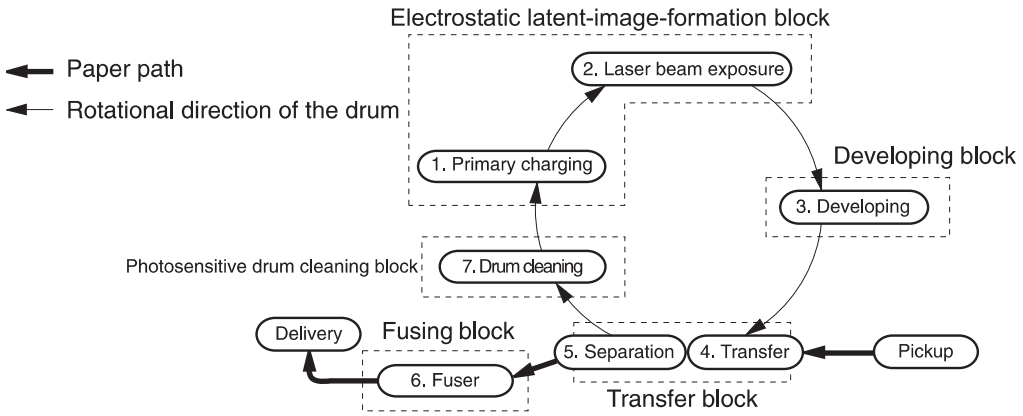
Image-formation system

Laser printing requires the interaction of several technologies, including electronics, optics, and electrophotographics, to produce a printed page. Each process functions independently and must be coordinated with the other product processes. Image formation consists of the following five processes:

- Electrostatic latent-image formation
- Developing
- Transfer
- Fusing
- Drum cleaning

These five processes contain seven steps, which are shown in Figure 4-9 Image-formation system on page 43 and described in the following sections.

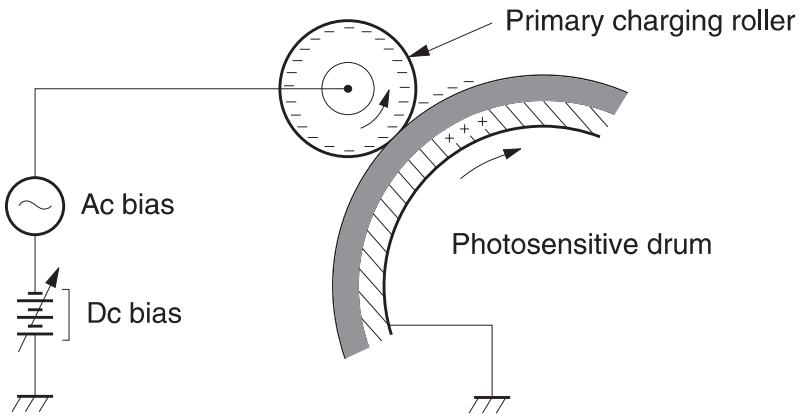
Figure 4-9 Image-formation system



Step 1: Primary charging

DC and AC biases are applied to the primary charging roller, which transfers a uniform negative potential to the photosensitive drum.

Figure 4-10 Primary charging



Step 2: Laser beam exposure

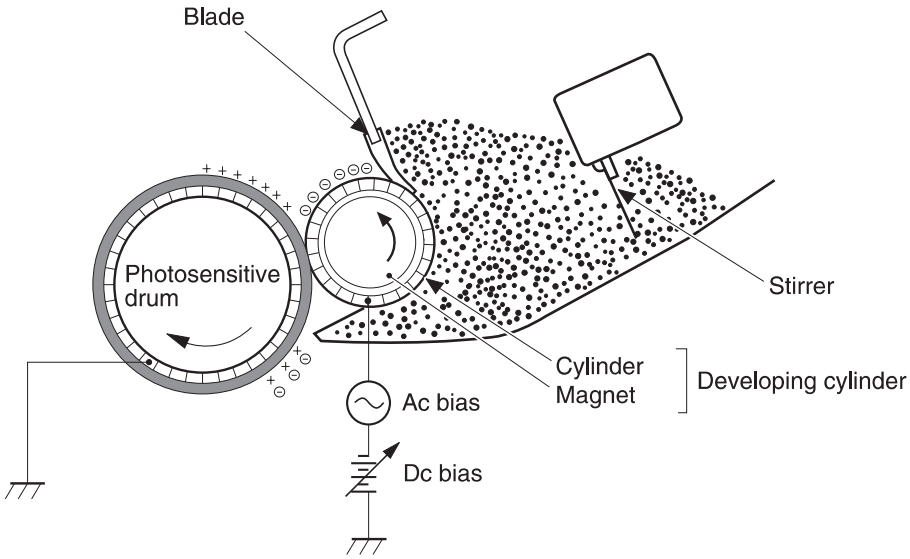
The laser beam scans the photosensitive drum to neutralize negative charges on parts of the drum. An electrostatic latent image is formed on the drum where negative charges were neutralized.

Step 3: Developing

The developing cylinder comes in contact with the photosensitive drum to deposit toner onto the electrostatic latent image.

NOTE: The charges on the exposed area of the drum are shown as positive in Figure 4-11 Developing on page 44. The charges are actually negative, but they are more positive than the charges on the developing cylinder.

Figure 4-11 Developing

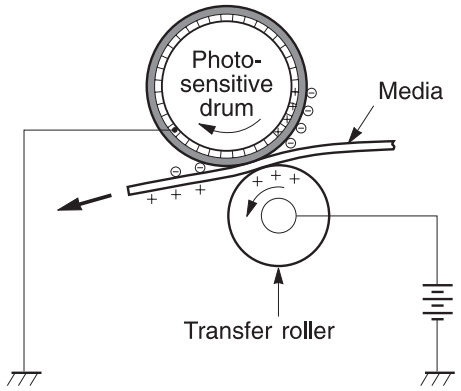


Toner acquires a negative charge through friction from the developing cylinder and the blade. When the negatively charged toner comes in contact with the drum, the toner adheres to the electrostatic latent image. The image on the drum becomes visible because of the toner.

Step 4: Transfer

The transfer charging roller, to which a DC positive bias is applied, imparts a positive charge on the print media. When the print media comes in contact with the photosensitive drum, the toner is transferred to the print media.

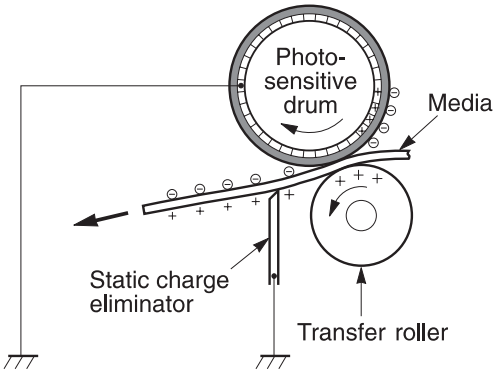
Figure 4-12 Transfer



Step 5: Separation

The elasticity of the print media causes its separation from the photosensitive drum. A static-charge eliminator aids separation by weakening any electrostatic adhesion.

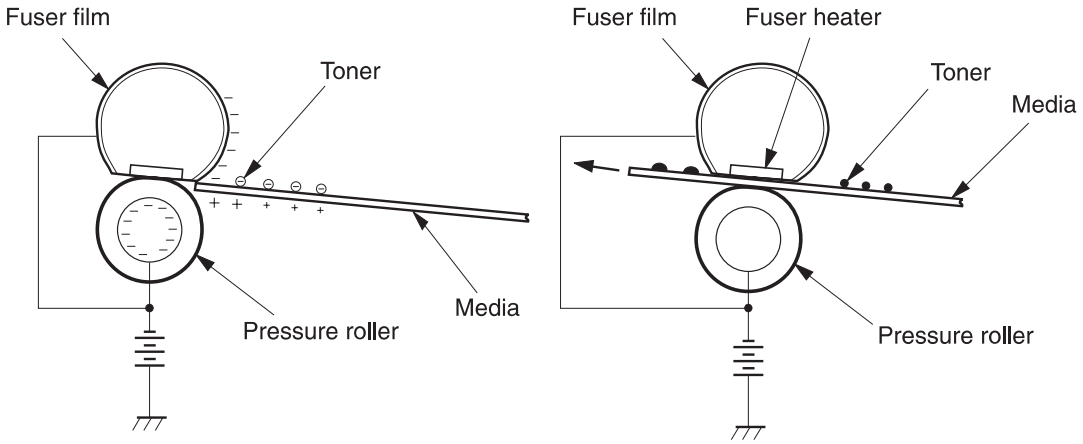
Figure 4-13 Separation



Step 6: Fusing

The DC negative bias applied to the fusing film strengthens the holding force of the toner on the print media and prevents the toner from scattering.

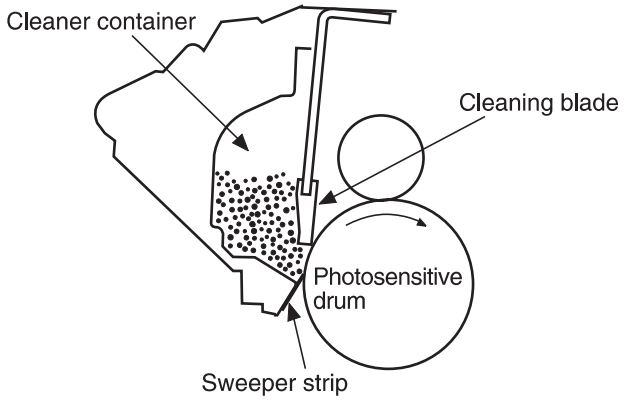
Figure 4-14 Fusing



Step 7: Drum cleaning

The cleaning blade scrapes the residual toner off of the photosensitive drum and deposits it into the waste-toner case.

Figure 4-15 Drum cleaning



5 Removal and replacement

- Removal and replacement strategy
- Scanner assembly
- Product base

Removal and replacement strategy

- Introduction
- Before performing service
- After performing service
- Post-service tests
- Parts removal order

Introduction

This chapter documents the removal and replacement of field-replaceable units (FRUs) only. Replacing FRUs is generally the reverse of removal. Occasionally, notes and tips are included to provide directions for difficult or critical replacement procedures.

HP *does not* support the repairing of individual subassemblies or troubleshooting at the component level.

Note the length, diameter, color, type, and location of each screw. Be sure to return each screw to its original location during reassembly.

Incorrectly routed or loose wire harnesses can interfere with other internal components and can become damaged or broken. Frayed or pinched harness wires can be difficult to locate. When replacing wire harnesses, always use the provided wire loops, lance points, or wire-harness guides.

Removal and replacement warnings, cautions, notes, and tips

⚠ **WARNING!** Turn the product off, wait 5 seconds, and then remove the power cord before attempting to service the product. If this warning is not followed, severe injury can result, as well as damage to the product. The power must be on for certain functional checks during problem solving. However, the power supply should be disconnected during parts removal.

Never operate or service the product with the protective cover removed from the laser/scanner assembly. The invisible reflected beam can damage your eyes.

Sheet-metal and plastic edges in the product can be sharp. Use caution when servicing this product.

△ **CAUTION:** Do not bend or fold the flat flexible cables (FFCs) during removal or installation. Also, do not straighten pre-folds in the FFCs. You *must* make sure that all FFCs are fully seated in their connectors. Failure to fully seat an FFC into a connector can cause a short circuit in a PCA.

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. For example, the color of the external panels and covers might be different than your product. However, this does not affect the validity of the procedures in this chapter.

TIP: To install a self-tapping screw, first turn it counterclockwise to align it with the existing thread pattern, and then carefully turn it clockwise to tighten. Do not overtighten.

Electrostatic discharge

△ **CAUTION:** The product contains components that are sensitive to electrostatic discharge (ESD). Always perform service work at ESD-protected workstation. If an ESD-protected workstation is not available, discharge body static by grasping the print engine chassis before touching an ESD-sensitive component. Ground the print engine chassis *before* servicing the product.

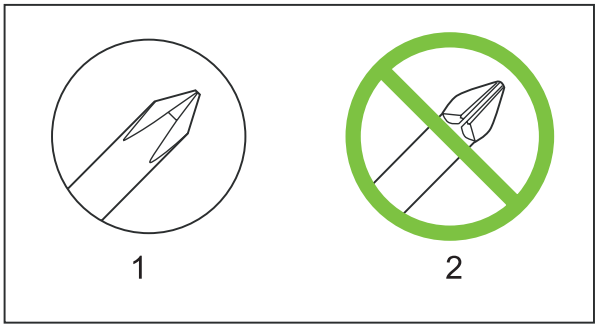
Required tools

- #2 Phillips screwdriver with magnetic tip
- Small flat-blade screwdriver
- Long flat-blade screwdriver
- Needle-nose pliers
- ESD mat (if one is available)
- Penlight (optional)

△ **CAUTION:** Always use a Phillips screwdriver (callout 1). Do not use a pozidrive screwdriver (callout 2) or any motorized screwdriver. These can damage screws or screw threads.

Do *not* pull directly on the wires to disconnect them. *Always* pull on the plastic body of a connector to avoid damaging the connector wires.

Figure 5-1 Phillips and pozidrive screwdriver comparison



Before performing service

- If possible, print a configuration page (to record customer settings) and menu map report. See Information pages on page 30.
- Remove all media from the product and remove the input tray.
- Turn off the power by using the power switch.
- Unplug the power and interface cables.

- Place the product on an ESD mat, if one is available. If an ESD-protected workstation is not available, discharge body static and ground the print engine chassis *before* touching an ESD-sensitive part.
- Remove the print cartridge. See Print cartridge on page 25.

After performing service

- Replace the print cartridge and input tray.
- Reload the input tray with media.
- Perform the post-service tests. See Post-service tests on page 51.

Post-service tests

After service has been completed, the following tests can be used to verify that the repair or replacement was successful.

Test 1 (print-quality test)

1. Verify that you have completed the necessary reassembly steps.
2. Ensure that the input tray contains clean, unmarked paper.
3. Attach the power cord and interface cable, and then turn on the product.
4. Verify that the expected start-up sounds occur.
5. Print a configuration page, and then verify that the expected printing sounds occur.
6. Print a demo page, and then verify that the print quality is as expected.
7. Send a print job from the host computer, and then verify that the output meets expectations.
8. If necessary, restore any customer product settings.
9. Clean the outside of the product with a damp cloth.

Test 2 (copy-quality test)

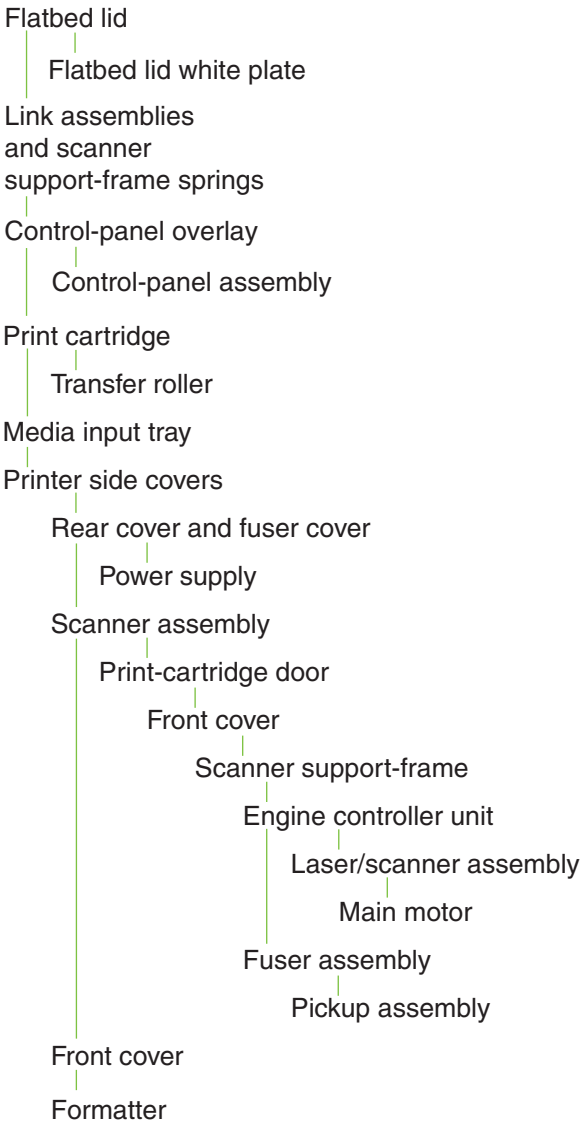
1. Verify that you have completed the necessary reassembly steps.
2. Ensure that the input tray contains clean, unmarked paper.
3. Attach the power cord and interface cable, and then turn on the product.
4. Verify that the expected start-up sounds occur.
5. Print a configuration page, and then verify that the expected printing sounds occur.
6. Place the configuration page on the scanner glass.
7. Print a copy job, and then verify the results.
8. Clean the outside of the product with a damp cloth.

Parts removal order

Use the following diagrams to determine which parts of the product must be removed before servicing.

NOTE: The scanner assembly might be contaminated if it is opened outside of a cleanroom environment. For this reason, the entire scanner assembly is replaceable only as a unit. Replacing the scanner assembly as an entire assembly replaces the scan module, the scan motor, and the cable.

Figure 5-2 Parts removal order



Scanner assembly

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. For example, the color of the external panels and covers might be different than your product. However, this does not affect the validity of the procedures in this chapter.

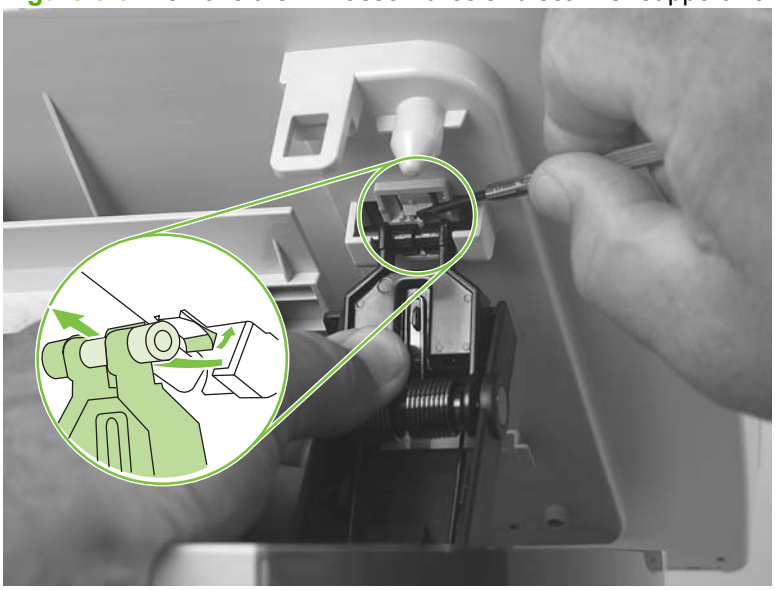
Link assemblies and scanner support-frame spring

1. Push the print-cartridge access button and raise the scanner assembly until it is locked open.
2. Use a small flat-blade screwdriver to release the link tabs on each link assembly.

WARNING! When the link assemblies are disengaged, the scanner assembly can easily fall off of the product base if it is rotated too far towards the back of the product.

CAUTION: Do not push too hard on the link tabs or the tabs might break.

Figure 5-3 Remove the link assemblies and scanner support-frame spring (1 of 4)



3. Rotate a link assembly toward the front of the product until the link disengages from the scanner support frame.

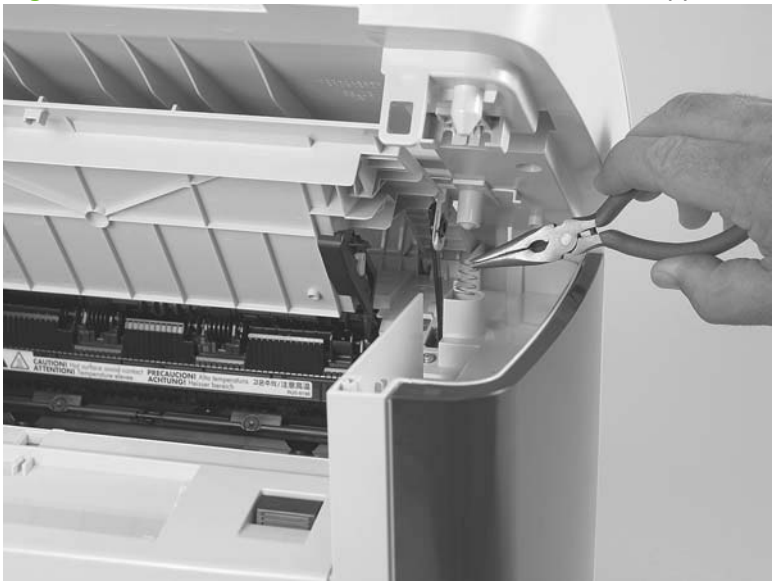
Figure 5-4 Remove the link assemblies and scanner support-frame spring (2 of 4)

4. Remove the link assembly. Repeat these steps to remove the remaining link.

Figure 5-5 Remove the link assemblies and scanner support-frame spring (3 of 4)

5. Use needle-nose pliers to remove the scanner support-frame spring.

Figure 5-6 Remove the link assemblies and scanner support-frame spring (4 of 4)



Scanner lid

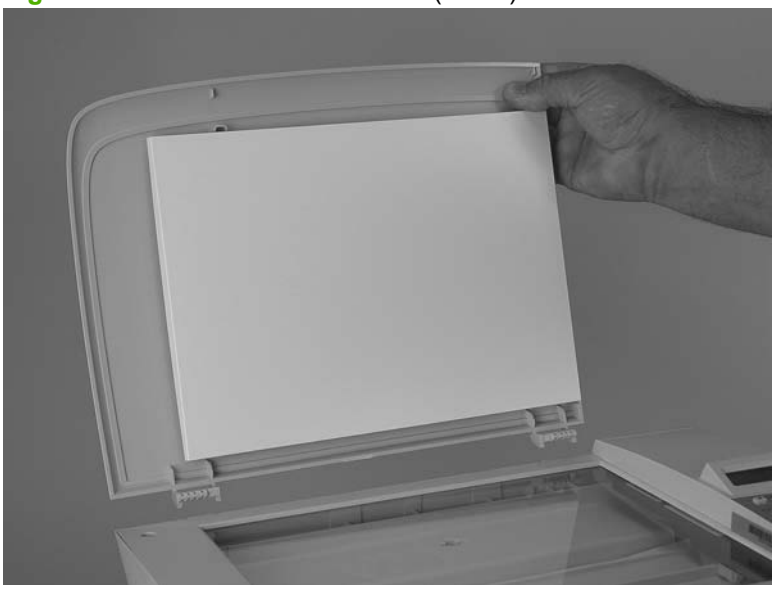
1. Open the scanner lid.

Figure 5-7 Remove the scanner lid (1 of 2)

2. Lift the scanner lid straight up to remove it from the scanner assembly.

△ **CAUTION:** Avoid touching the flatbed glass. Skin oils and fingerprints can contaminate the glass and cause print-quality problems.

Figure 5-8 Remove the scanner lid (2 of 2)



Control-panel overlay

Carefully pry the outside edge of the control-panel overlay away from the product to remove it.

△ **CAUTION:** Be careful to not damage the overlay if it will be reinstalled after servicing the device.

TIP: When installing a replacement control-panel overlay, you can dispose of the barcode part-number portion of the replacement overlay.

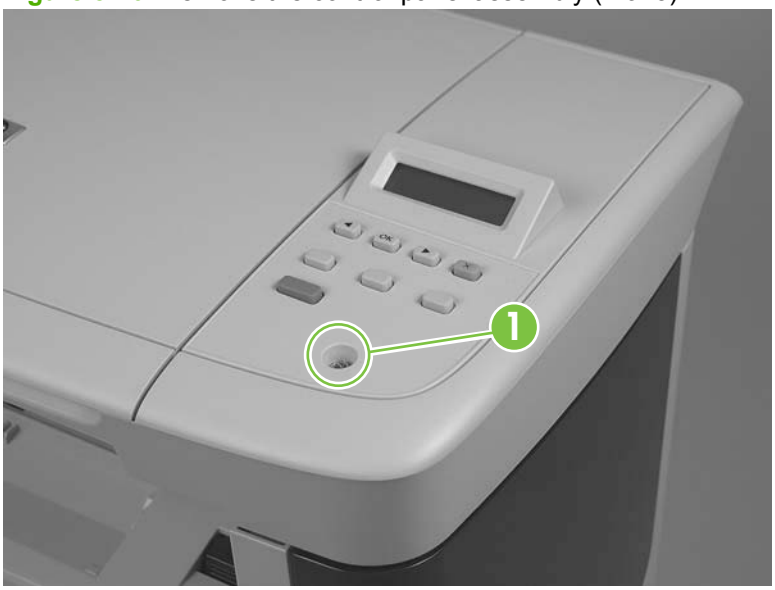
Figure 5-9 Remove the control-panel overlay

Control-panel assembly

△ **CAUTION:** The control-panel is an ESD-sensitive component.

1. Remove the control-panel overlay. See Control-panel overlay on page 57.
2. Remove one screw (callout 1).

Figure 5-10 Remove the control-panel assembly (1 of 3)



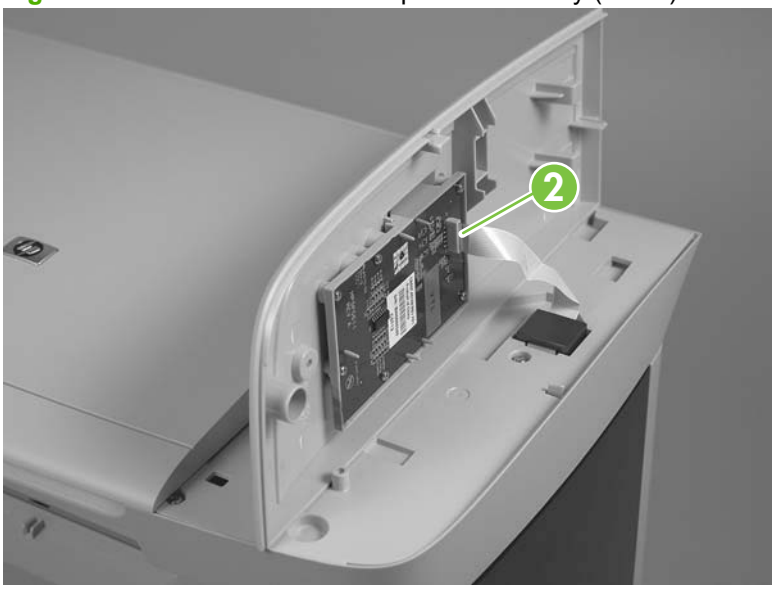
3. Slide the control panel forward and slightly lift up the control panel.

Figure 5-11 Remove the control-panel assembly (2 of 3)

4. Disconnect one FFC (callout 2). Remove the control-panel assembly.

△ **CAUTION:** Do not bend or fold the FFCs during the removal or reinstallation process.

Figure 5-12 Remove the control-panel assembly (3 of 3)

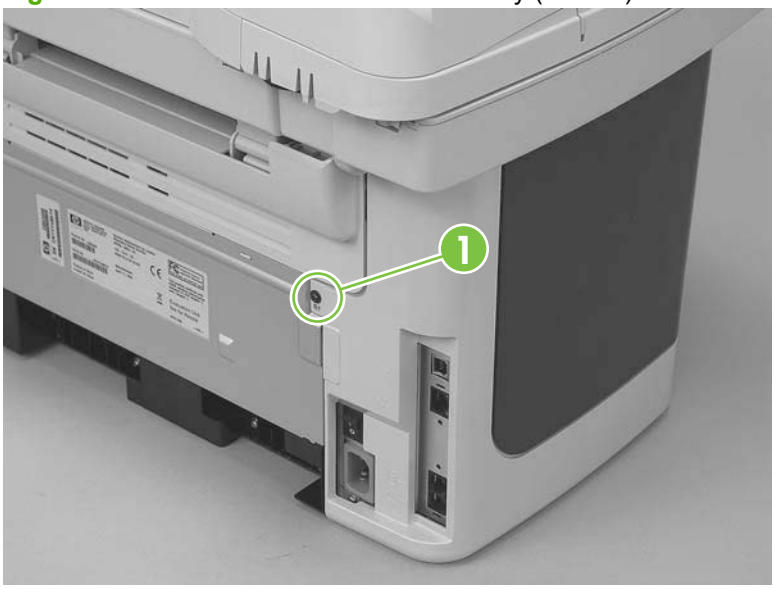


Scanner assembly

△ **CAUTION:** Avoid touching the flatbed glass. Skin oils and fingerprints can contaminate the glass or pad and cause print-quality or paper-pickup problems.

1. Remove one screw (callout 1).

Figure 5-13 Remove the scanner assembly (1 of 10)

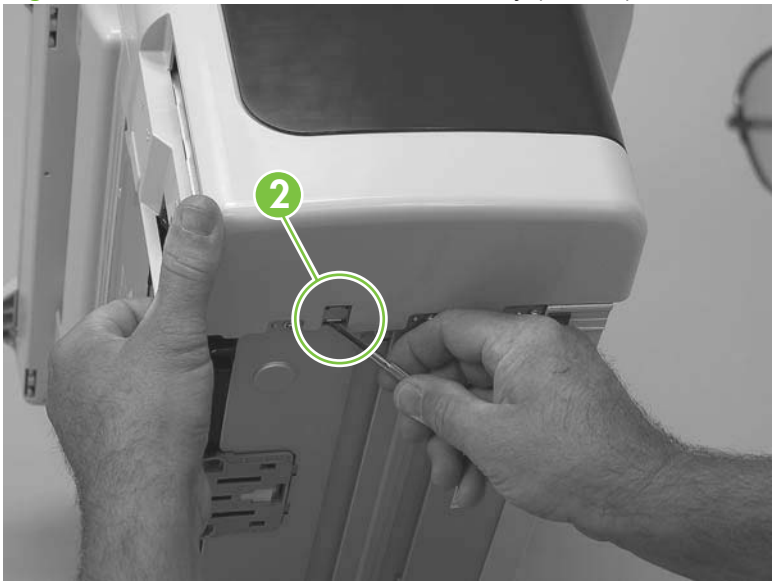


2. Release one tab on the back side of the cover.

Figure 5-14 Remove the scanner assembly (2 of 10)

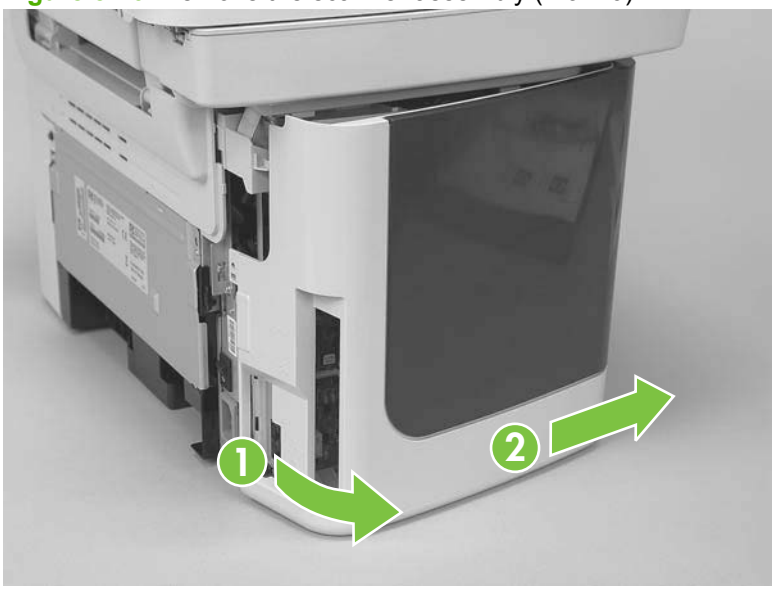
3. Release the bottom tab (callout 2).

Figure 5-15 Remove the scanner assembly (3 of 10)



4. Rotate the back side of the cover away from the product, and then slide the cover toward the front of the product to remove it.

Figure 5-16 Remove the scanner assembly (4 of 10)



5. Push the print-cartridge door button to release the scanner assembly, and then raise the assembly until it locks open.

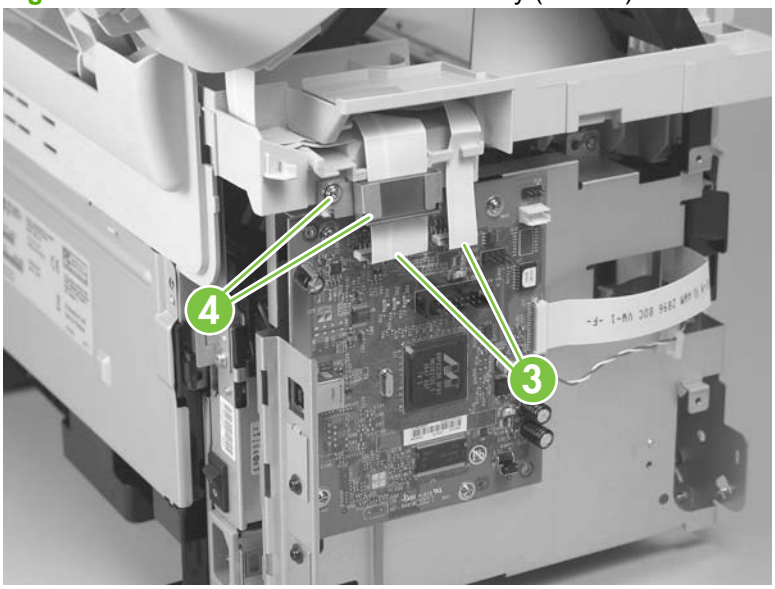
Figure 5-17 Remove the scanner assembly (5 of 10)

6. Disconnect two FFCs (callout 3; J10 and J12) on the formatter. Remove one FFC from the ferrite (callout 4).

TIP: It might be easier to thread the FFC through the ferrite by removing one screw and the ferrite (callout 4).

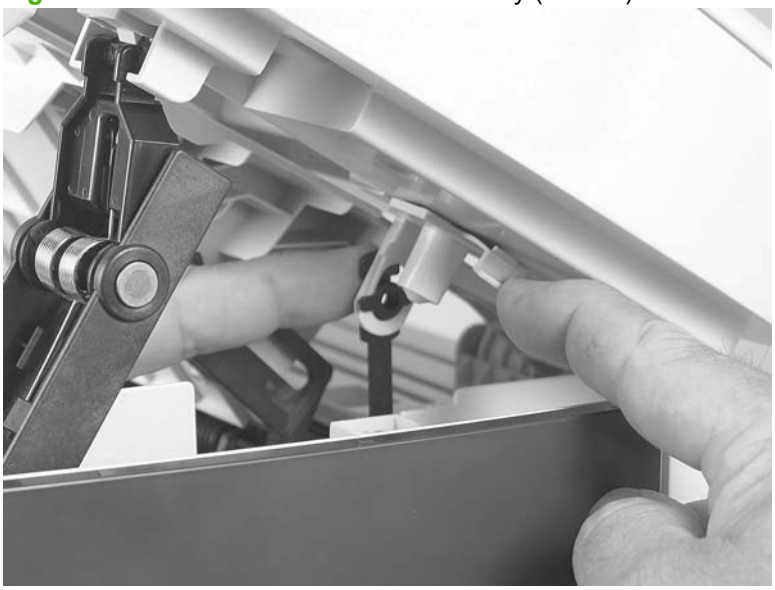
The ferrite is not captive in the bracket and can be dislodged when you remove the bracket.

Figure 5-18 Remove the scanner assembly (6 of 10)



7. Grasp the tab on the gear-drive arm bracket and carefully flex it away from the scanner assembly to release the bracket.

Figure 5-19 Remove the scanner assembly (7 of 10)



8. Push the bracket toward the right side of the product until its mounting tabs clear the holes in the scanner assembly.

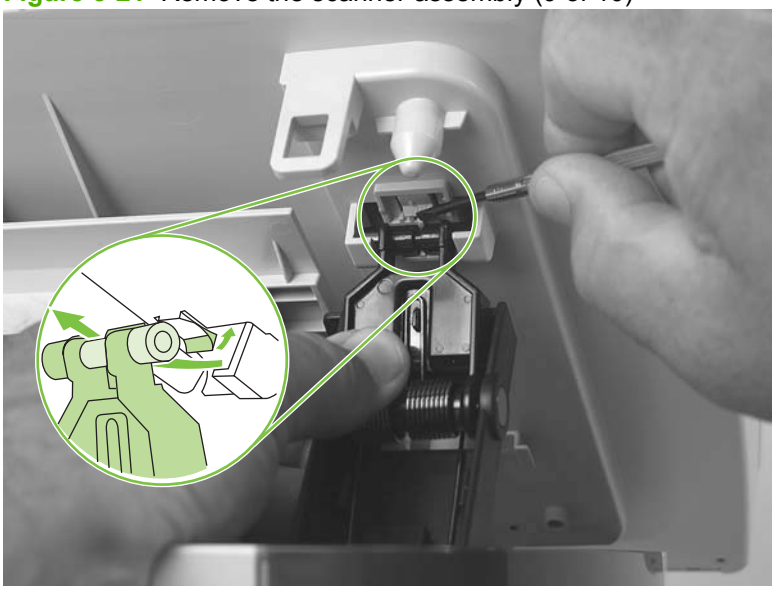
Figure 5-20 Remove the scanner assembly (8 of 10)

9. Use a small flat-blade screwdriver to release the tabs on each link assembly.

WARNING! When the links are disengaged, the scanner assembly can easily fall off of the product base if it is rotated too far toward the back of the product.

CAUTION: Do not push too hard on the link tabs or the tabs might break.

Figure 5-21 Remove the scanner assembly (9 of 10)

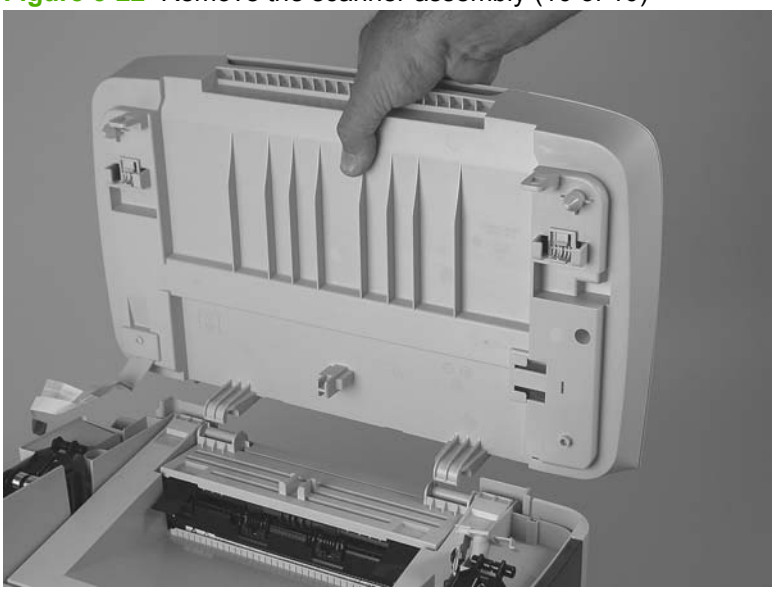


10. Rotate the scanner assembly toward the rear of the product until the rear hinges clear the chassis hinge pins. Lift the scanner assembly off of the product base.

CAUTION: Make sure that the scanner lid is supported so that it does not swing open when you remove the scanner assembly.

NOTE: Do not lose the two scanner cushions in the scanner support-frame corners when moving the product base. See Scanner cushions on page 70.

Figure 5-22 Remove the scanner assembly (10 of 10)



Product base

NOTE: Your product might not appear exactly as the one shown in the photos in this chapter. For example, the color of the external panels and covers might be different than your product. However, this does not affect the validity of the procedures in this chapter.

Print cartridge

CAUTION: To prevent damage, do not expose the print cartridge to direct or bright light. Cover it with a piece of paper.

1. Push the print-cartridge-door release button and raise the scanner assembly until it locks open.

Figure 5-23 Remove the print cartridge (1 of 2)

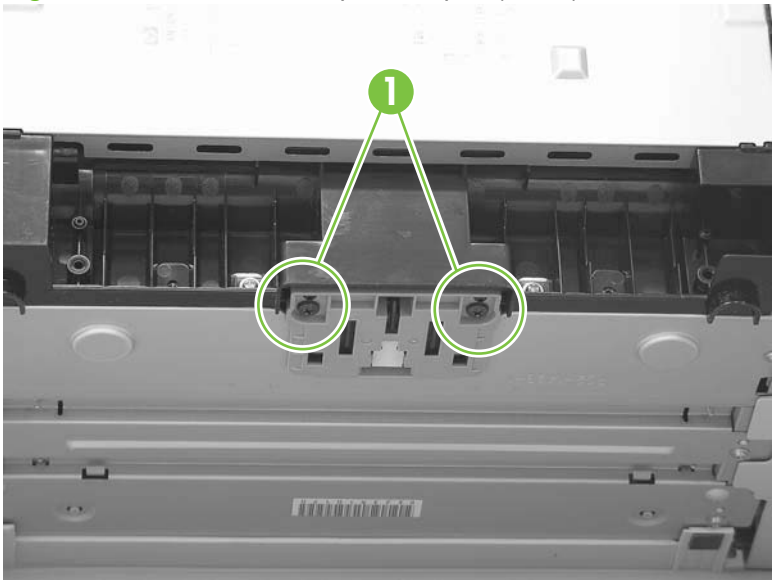
2. Pull the print cartridge up and out of the product.

Figure 5-24 Remove the print cartridge (2 of 2)

Separation pad

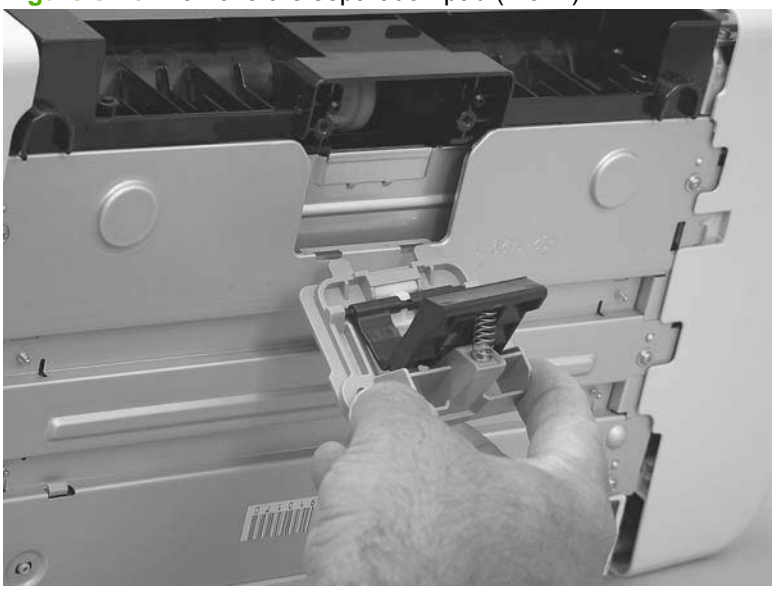
1. Position the product with the rear side facing you.
2. Support the product and tip it forward. Remove two screws (callout 1).

Figure 5-25 Remove the separation pad (1 of 2)



3. Remove the separation pad and frame.

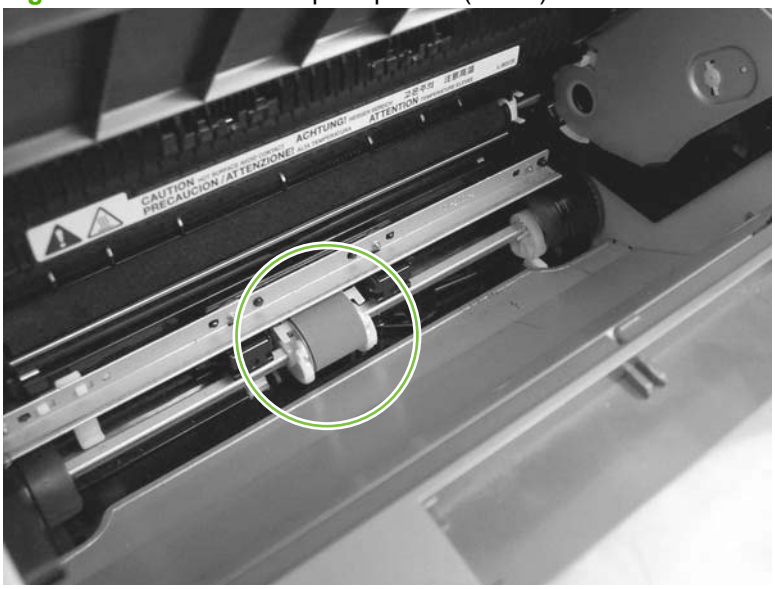
Figure 5-26 Remove the separation pad (2 of 2)



Pickup roller

1. Remove the print cartridge and locate the pickup roller. See Print cartridge on page 65.

Figure 5-27 Remove the pickup roller (1 of 5)

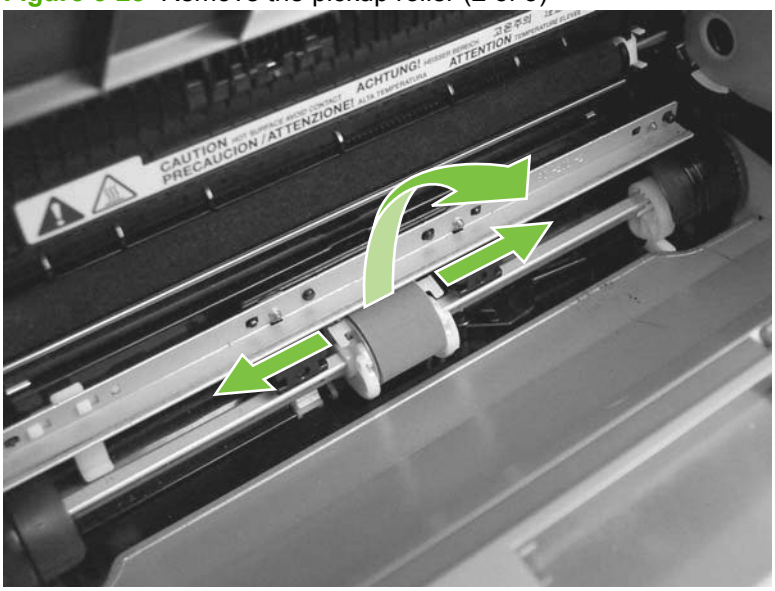


2. Gently release the small, white tabs on each side of the pickup roller by pushing them away from the roller, and then rotate the roller away from the mounting frame.

△ **CAUTION:** Do not touch the black-sponge transfer roller inside the product. Touching the transfer roller can damage the product.

Use gentle pressure to release the small white tabs to avoid breaking them.

Figure 5-28 Remove the pickup roller (2 of 5)

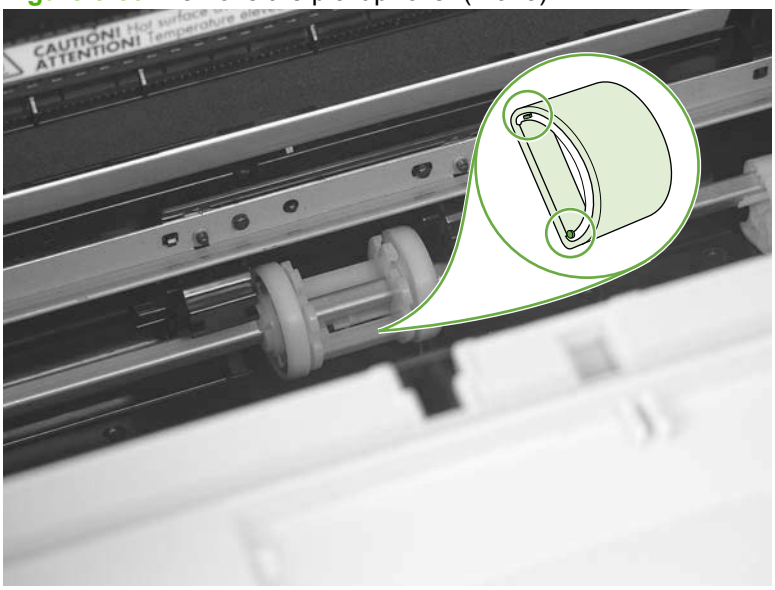


3. Gently pull the roller up and out of the product.

Figure 5-29 Remove the pickup roller (3 of 5)

4. Circular and rectangular pegs on each side of the pickup roller fit into corresponding slots on the pickup-roller mounting frame and prevent the roller from being incorrectly installed. Position the replacement pickup roller in the slots on the pickup-roller frame.

Figure 5-30 Remove the pickup roller (4 of 5)



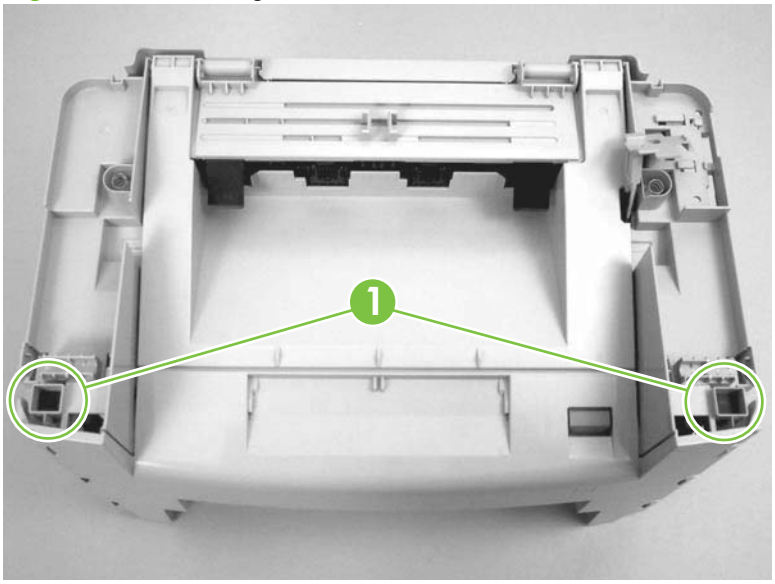
5. Rotate the top of the pickup roller into position until the white tabs on each side of the roller snap into place.

Figure 5-31 Remove the pickup roller (5 of 5)

Scanner cushions

1. Open the print-cartridge door.
2. Place a scanner cushion in each well on the scanner support frame (callout 1). Use the eraser-end of a pencil or use an ink pen with the cap on to seat each cushion in its well.

Figure 5-32 Installing the scanner cushions



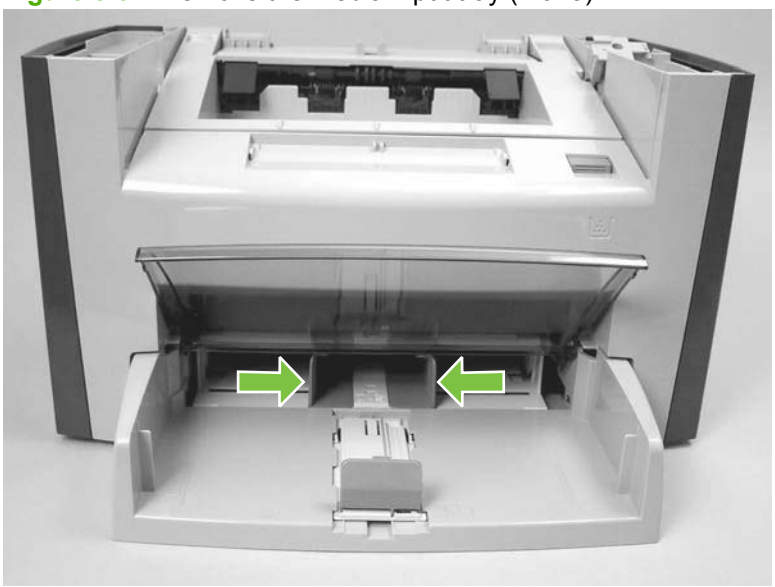
Media input tray

1. Open the media input tray lid.

Figure 5-33 Remove the media input tray (1 of 3)

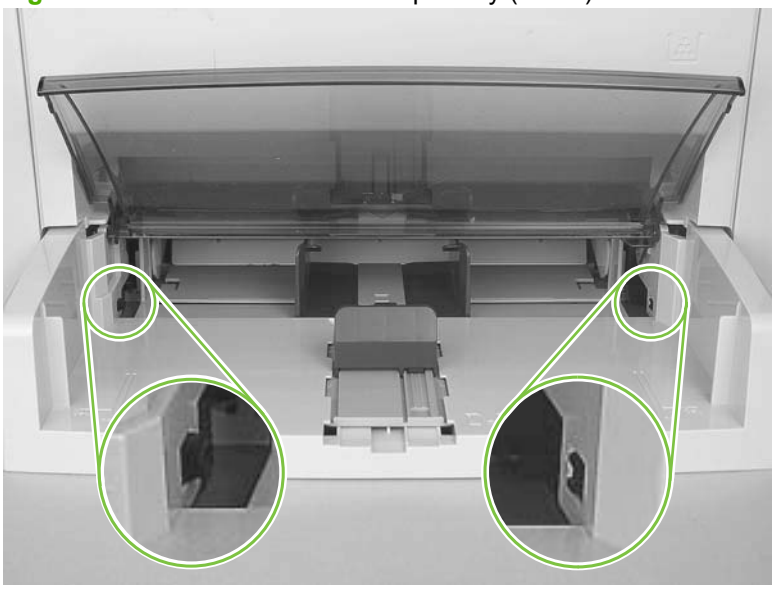
2. Slide the adjustable media guides to the center of the tray.

Figure 5-34 Remove the media input tray (2 of 3)



3. Depress the pickup-tray locking tabs to release the media input tray, and then pull it out and away from the product.

Figure 5-35 Remove the media input tray (3 of 3)

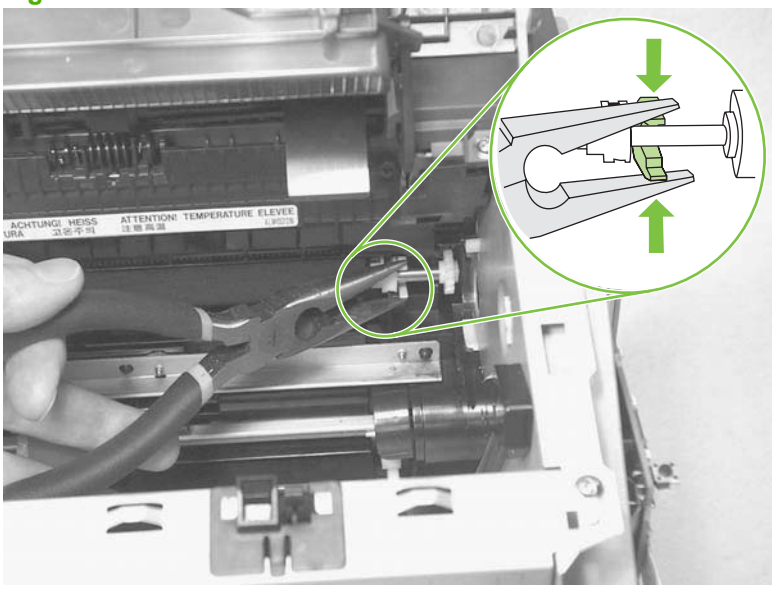


Transfer roller

△ **CAUTION:** Do not touch the black-sponge portion of the transfer roller. Skin oils deposited on the transfer roller might cause print-quality problems.

1. Open the print-cartridge door and remove the print cartridge.
2. Release the two small tabs on the transfer roller and then slide the roller to the right to release the left end of the roller shaft. Remove the transfer roller.

Figure 5-36 Remove the transfer roller

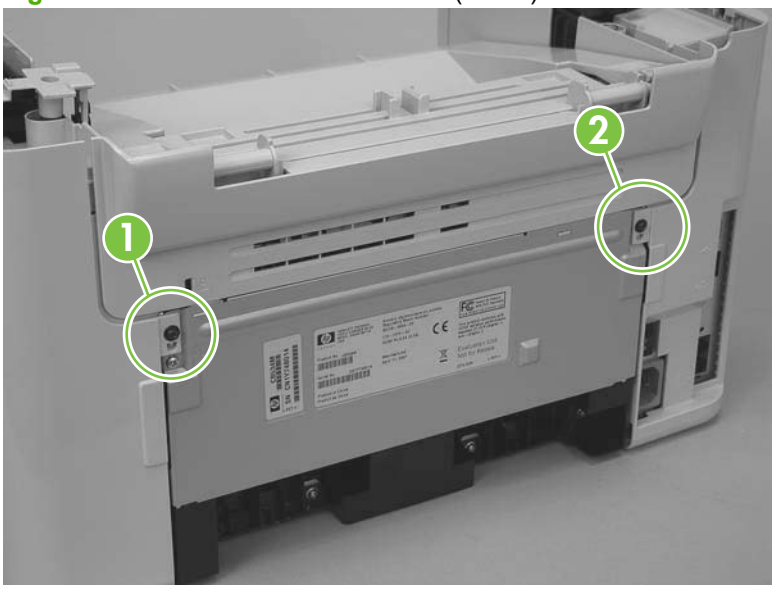


Side covers

NOTE: The procedure for removing the right-side and left-side covers is identical. The right-side cover is shown in the following procedure.

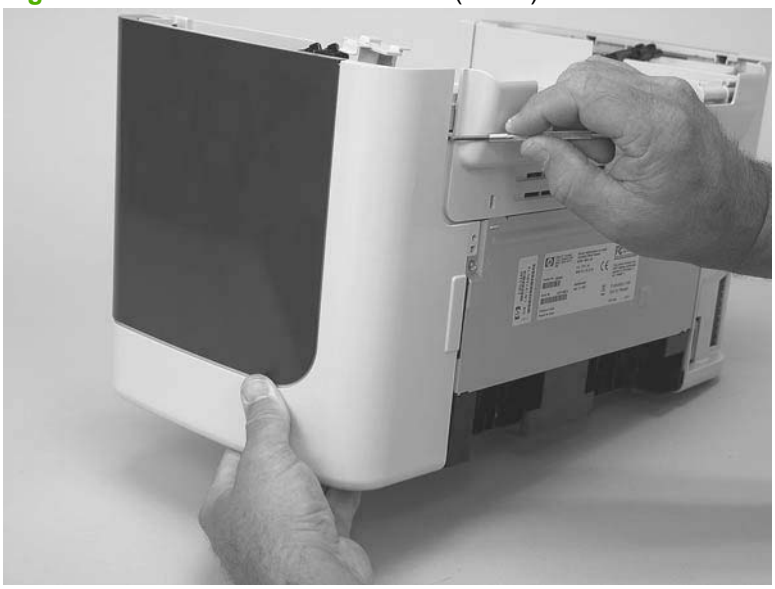
1. Remove one screw (callout 1). Callout 2 is the left-side cover screw.

Figure 5-37 Remove the side covers (1 of 4)



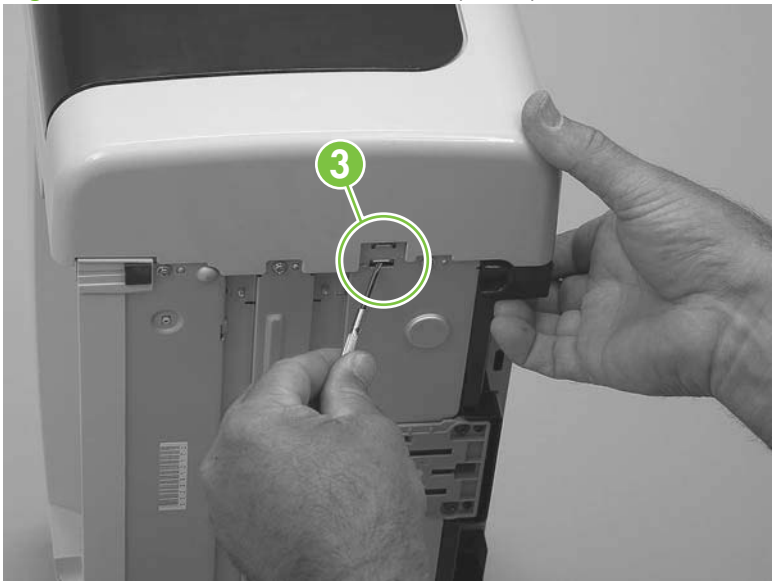
2. Release the locking tab on the back of the cover.

Figure 5-38 Remove the side covers (2 of 4)



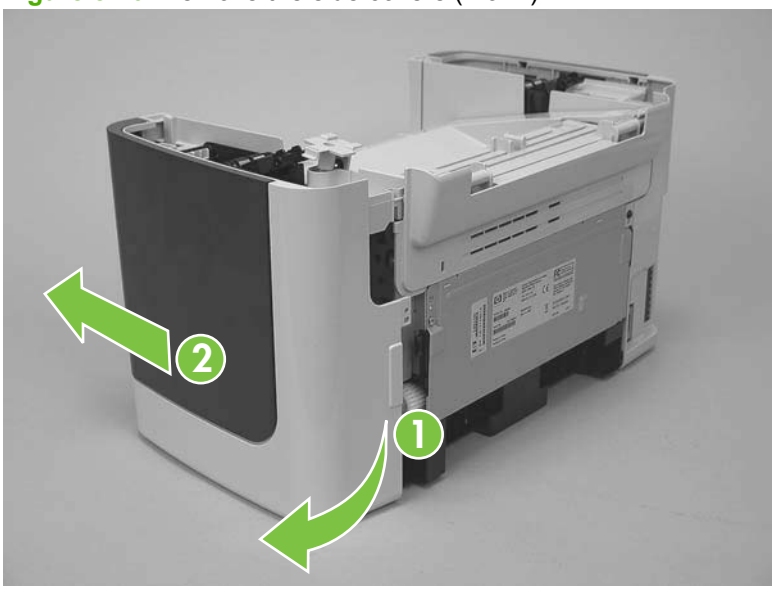
3. Release the bottom tab (callout 3).

Figure 5-39 Remove the side covers (3 of 4)



4. Slightly rotate the back side of the right cover away from the product, and then slide it toward the front of the product to release it.

Figure 5-40 Remove the side covers (4 of 4)

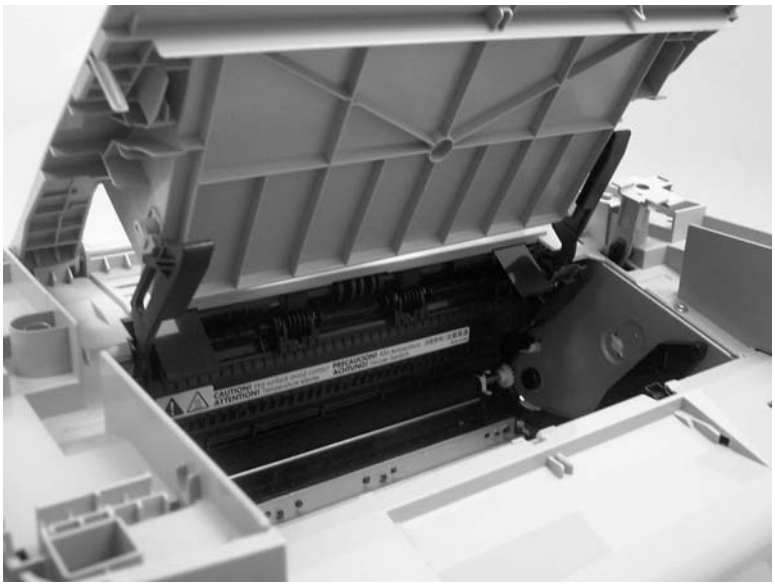


Print-cartridge door

1. Remove the scanner assembly. See Scanner assembly on page 60.
2. Fully open the print-cartridge door and gently pull downward on both print-cartridge swing arms to release them. (In Figure 5-41 Remove the print-cartridge door (1 of 2) on page 76, the left arm is disengaged).

△ **CAUTION:** Be careful when releasing the swing arms. They can easily break.

Figure 5-41 Remove the print-cartridge door (1 of 2)



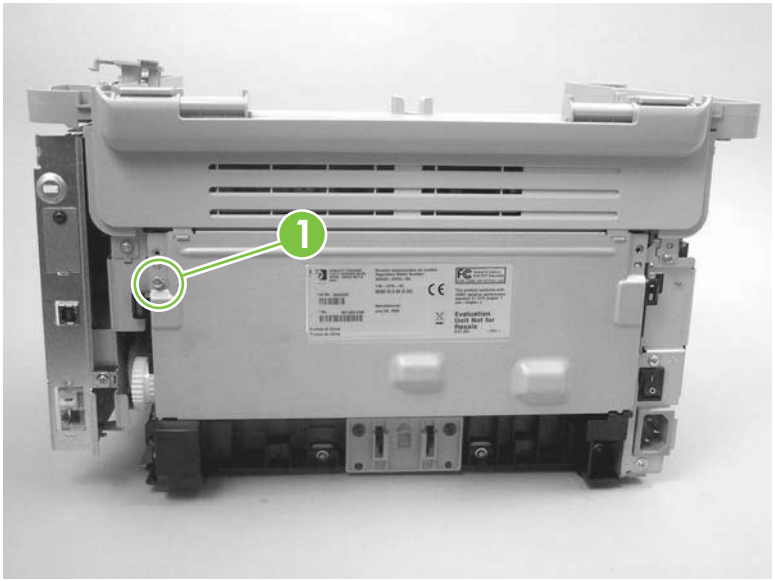
3. Rotate the door toward the back of the product and then lift it up and off of the product.

Figure 5-42 Remove the print-cartridge door (2 of 2)

Rear cover and fuser cover

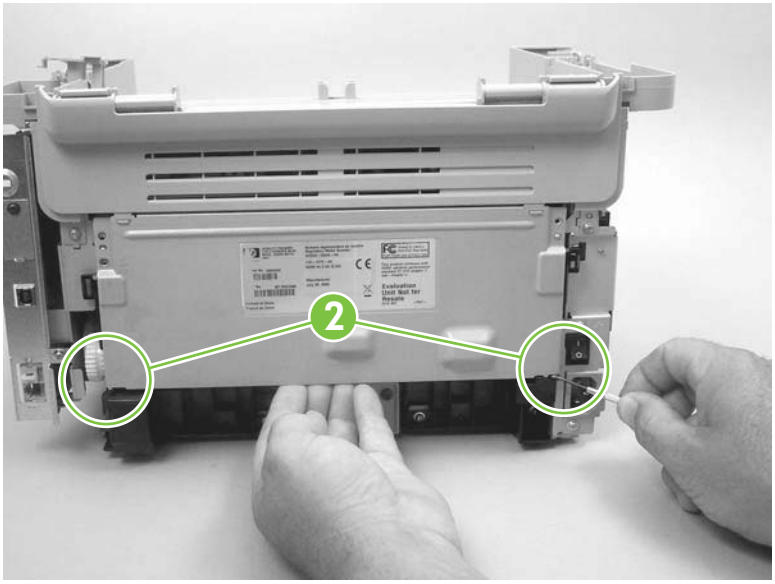
1. Remove the right-side and left-side covers. See Side covers on page 74.
2. Remove one screw (callout 1).

Figure 5-43 Remove the rear cover and fuser cover (1 of 3)



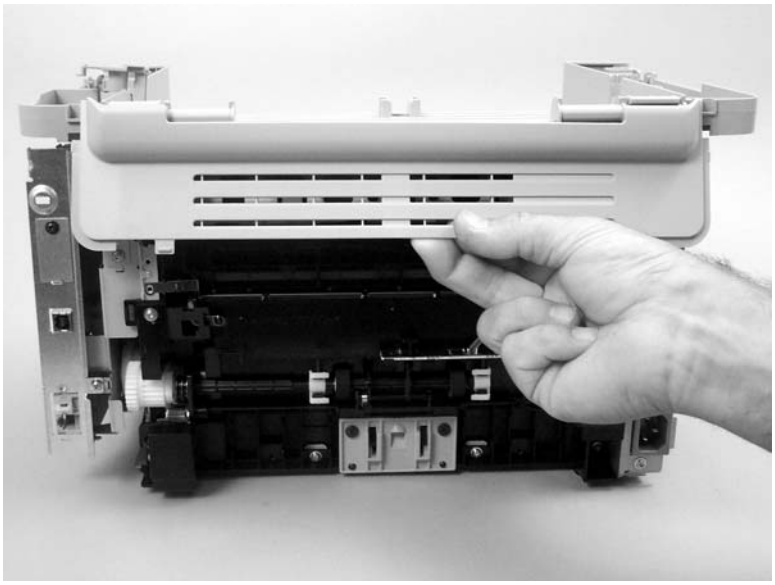
3. Release the two rear-cover locking tabs (callout 2). Rotate the bottom of the rear cover up and away from the product, and then remove it.

Figure 5-44 Remove the rear cover and fuser cover (2 of 3)



4. Rotate the bottom of the fuser cover away from the product, and then remove the fuser cover.

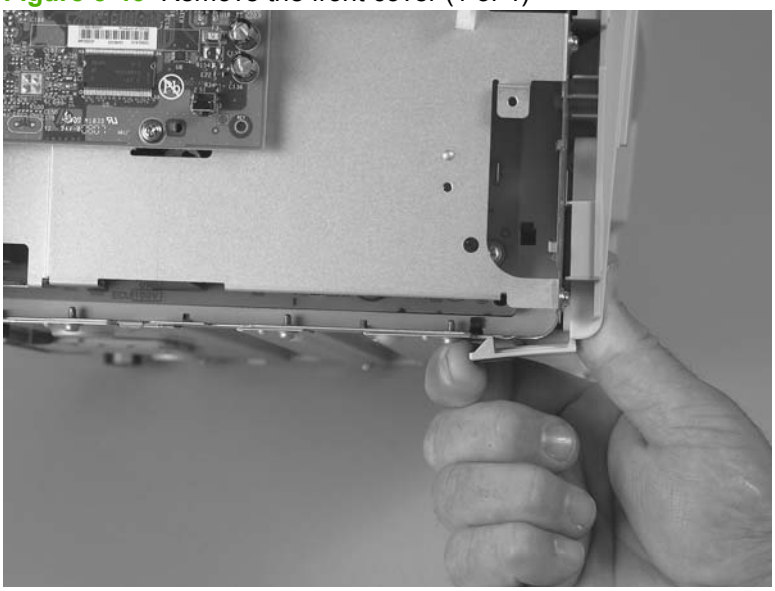
Figure 5-45 Remove the rear cover and fuser cover (3 of 3)



Front cover

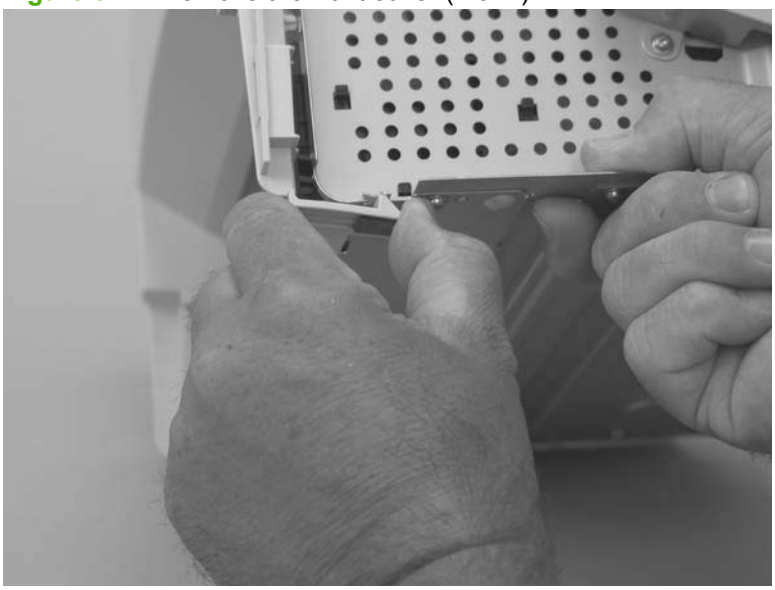
1. Remove the right-side and left-side covers. See Side covers on page 74.
2. Release the lower left-side front-cover locking tab and slightly pry the lower-left corner of the front cover away from the product.

Figure 5-46 Remove the front cover (1 of 4)



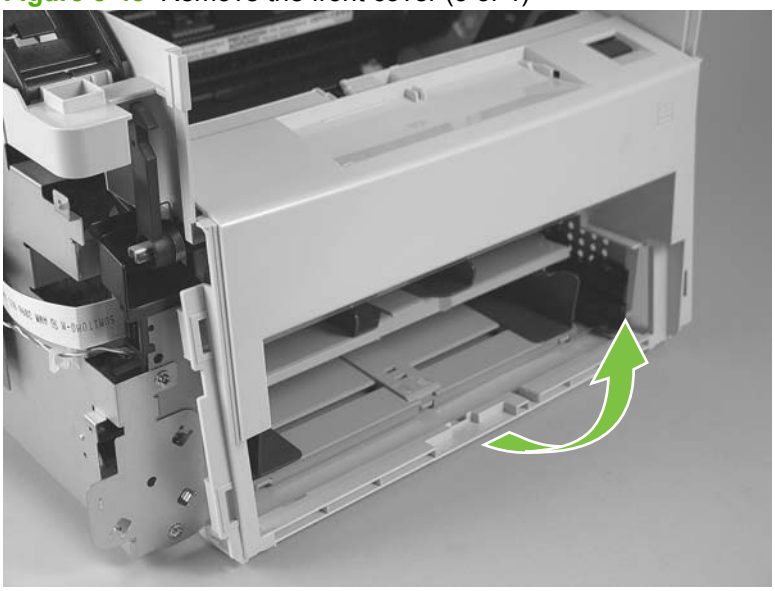
3. Release the lower right-side front-cover locking tab (located near the corner of the power supply) and slightly pry the lower-right corner of the front cover away from the product.

Figure 5-47 Remove the front cover (2 of 4)



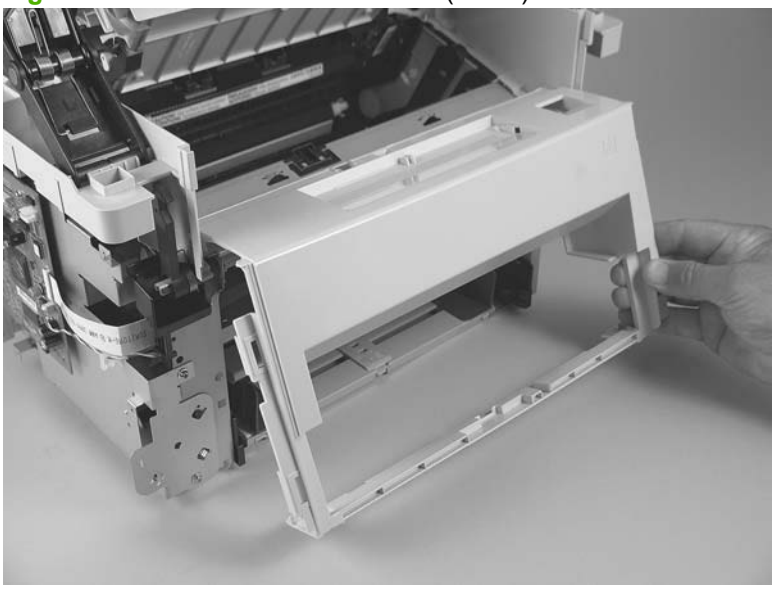
4. Rotate the bottom of the front cover away from the product to release it.

Figure 5-48 Remove the front cover (3 of 4)



5. Remove the front cover.

Figure 5-49 Remove the front cover (4 of 4)



Formatter

△ **CAUTION:** The formatter is an ESD-sensitive device.

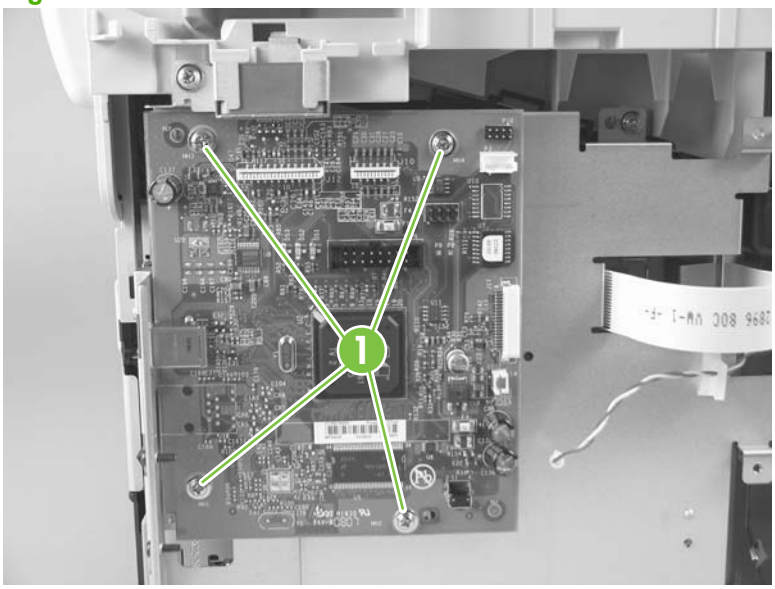
1. Remove the left cover. See Side covers on page 74.
2. Disconnect all FFCs and wire harnesses from the formatter.

△ **CAUTION:** Do not bend or fold the FFCs during the removal or reinstallation process.

NOTE: The scanner assembly is shown removed in this procedure. If the scanner assembly is installed, there will be additional FFCs connected to the formatter. You do not need to remove the scanner assembly to remove the formatter.

3. Remove four screws from the formatter PCA (callout 1). Remove the formatter.

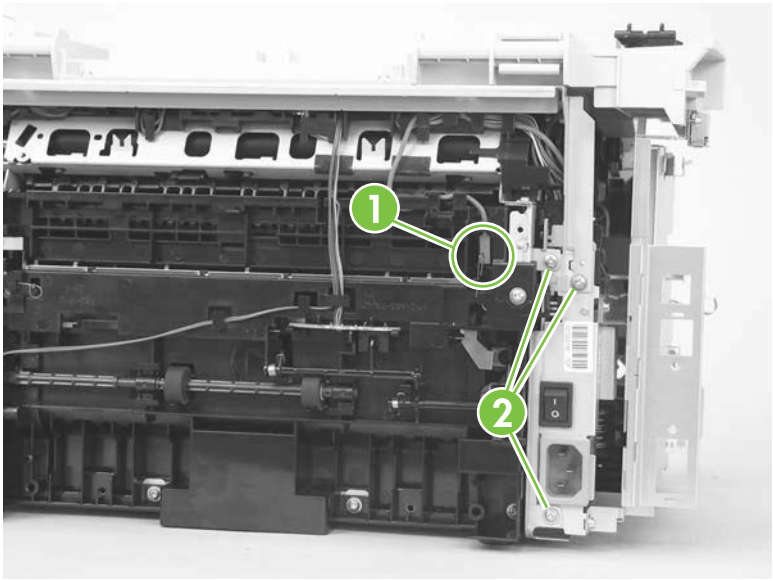
Figure 5-50 Remove the formatter



Power supply

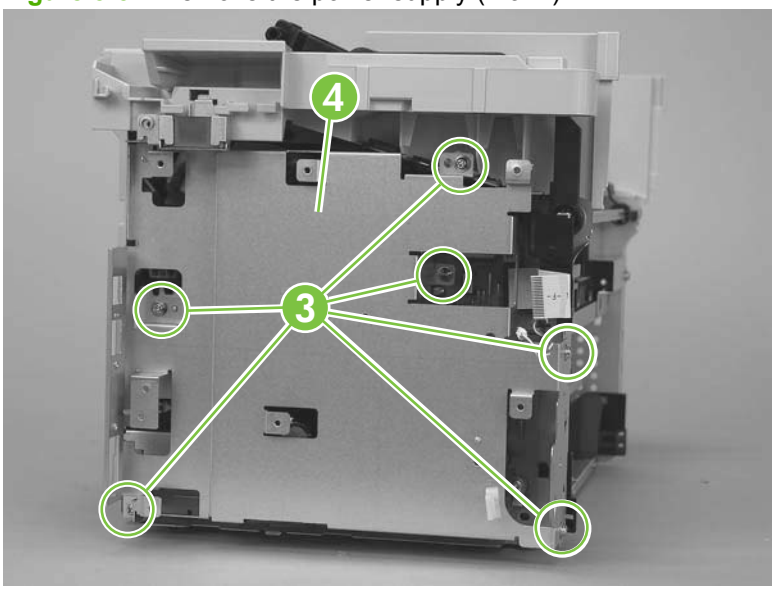
1. Remove the following assemblies:
   - Right and left covers. See Side covers on page 74.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 77.
   - Front cover. See Front cover on page 79.
   - Formatter. See Formatter on page 81.
2. Disconnect one spade connector (callout 1) and remove three screws (callout 2).

Figure 5-51 Remove the power supply (1 of 7)



3. Remove six screws (callout 3) and the sheet-metal plate (callout 4).

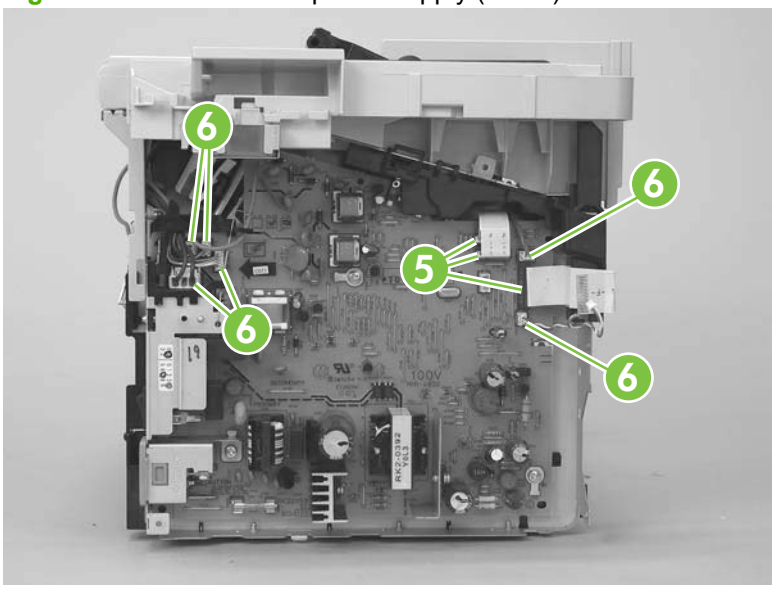
Figure 5-52 Remove the power supply (2 of 7)



4. Disconnect three FFCs (callout 5) and six wire-harness connectors (callout 6).

△ **CAUTION:** Do not bend or fold the FFCs during the removal or reinstallation process.

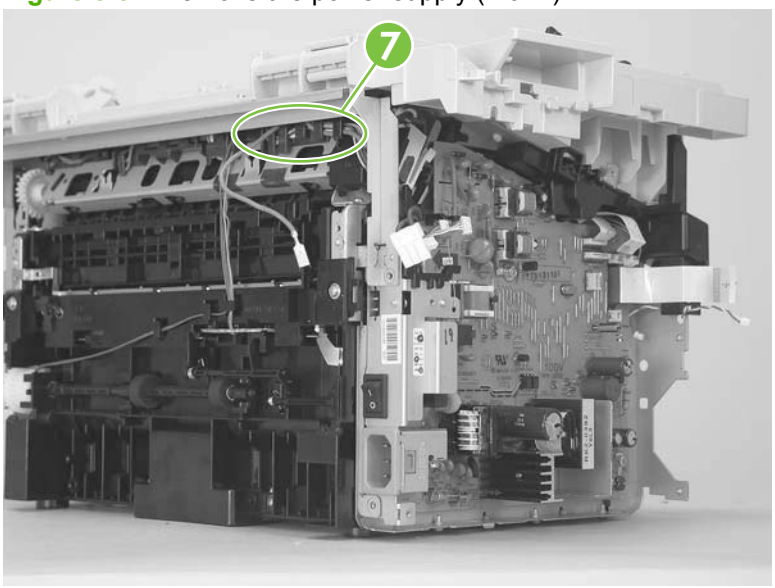
Figure 5-53 Remove the power supply (3 of 7)



5. Release the ground wire from the retainer (callout 7) on the product chassis.

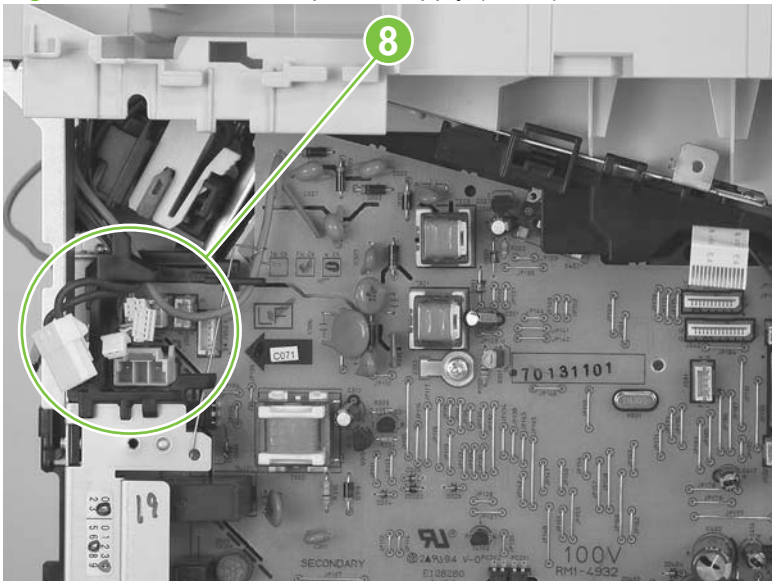
NOTE: You might need to slightly pry up on the scanner support frame to release the wire from the retainer.

Figure 5-54 Remove the power supply (4 of 7)



6. Release the wire harness from the retainer (callout 8) on the power supply.

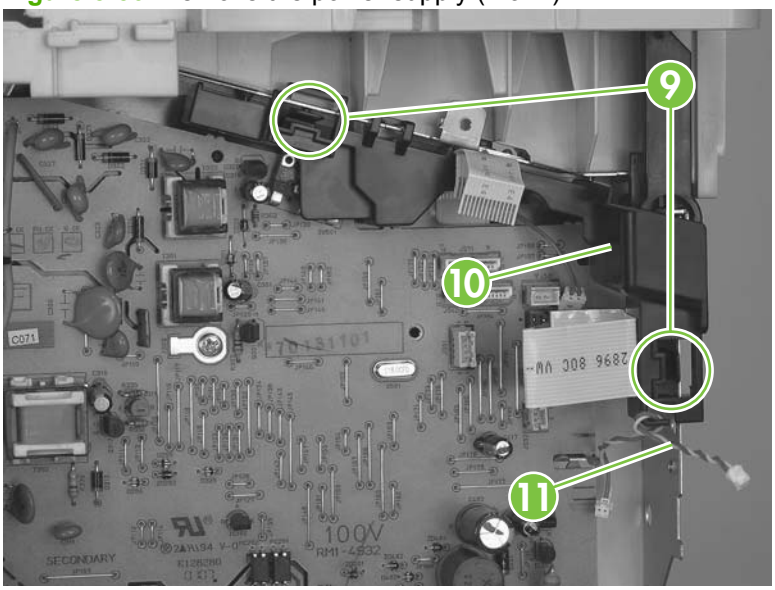
Figure 5-55 Remove the power supply (5 of 7)



7. Unclip two clips (callout 9) and remove one plastic bracket (callout 10).

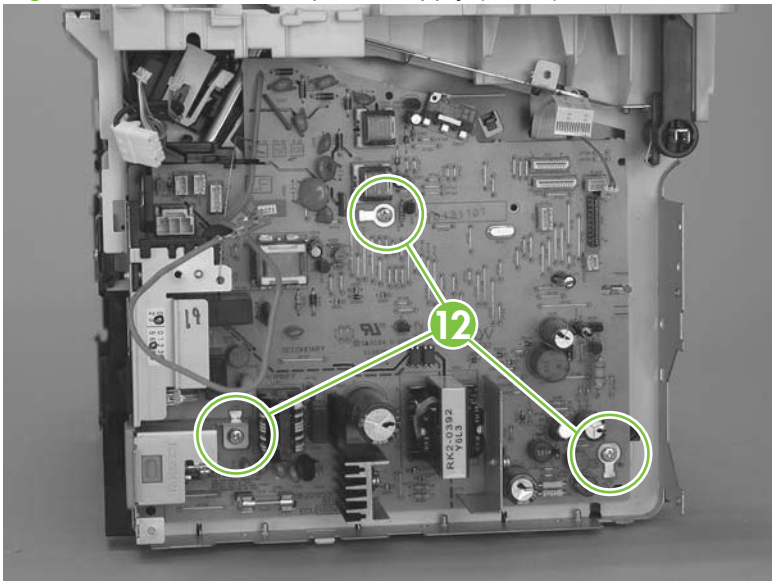
△ **CAUTION:** The wire harness (callout 11) attached to the bracket is not captive. Do not lose this wire harness when the bracket is removed.

Figure 5-56 Remove the power supply (7 of 7)



8. Remove three screws (callout 12). Remove the power supply.

Figure 5-57 Remove the power supply (7 of 7)



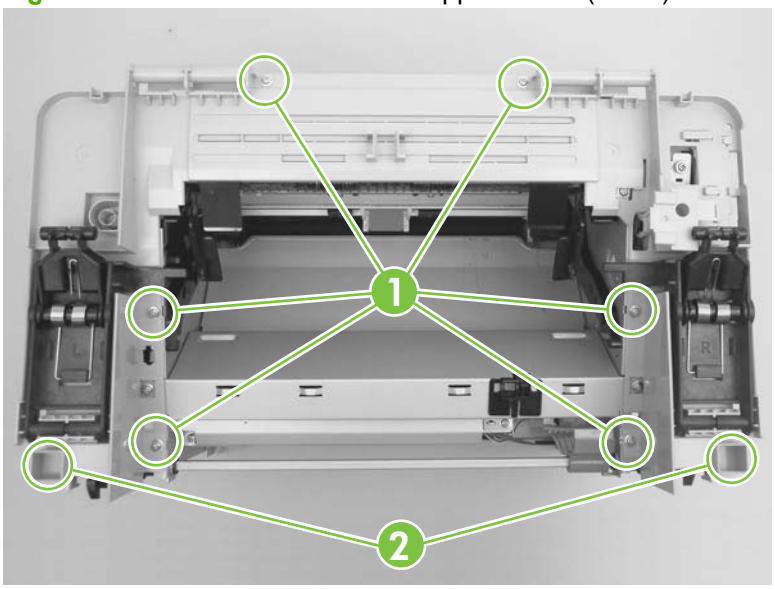
Scanner support frame

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 60.
   - Right and left cover. See Side covers on page 74.
   - Print-cartridge door. See Print-cartridge door on page 76.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 77.
   - Front cover. See Front cover on page 79.
2. Remove six screws (callout 1).

△ **CAUTION:** Be careful not to drop any screws into the product.

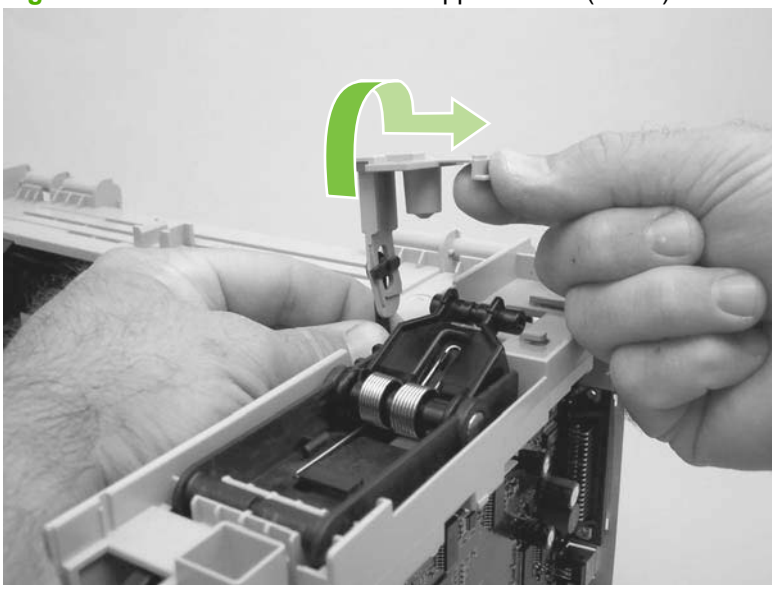
NOTE: If you turn over the scanner support frame after you remove it, the two scanner cushions (callout 2) might fall out and be misplaced.

Figure 5-58 Remove the scanner support frame (1 of 5)



3. Rotate the gear-drive bracket until the retainer on the gear-drive arm aligns with the opening in the bracket, and remove the bracket.

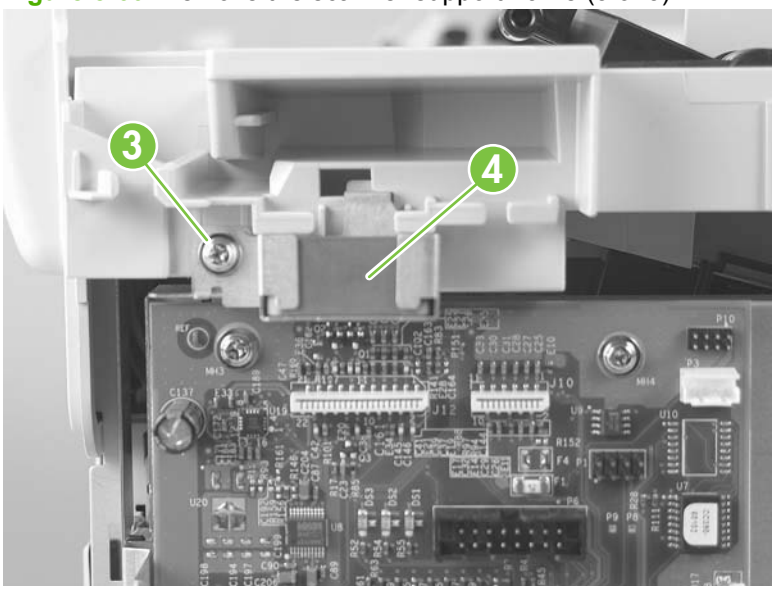
Figure 5-59 Remove the scanner support frame (2 of 5)



4. Remove one screw (callout 3) and the ferrite and bracket (callout 4).

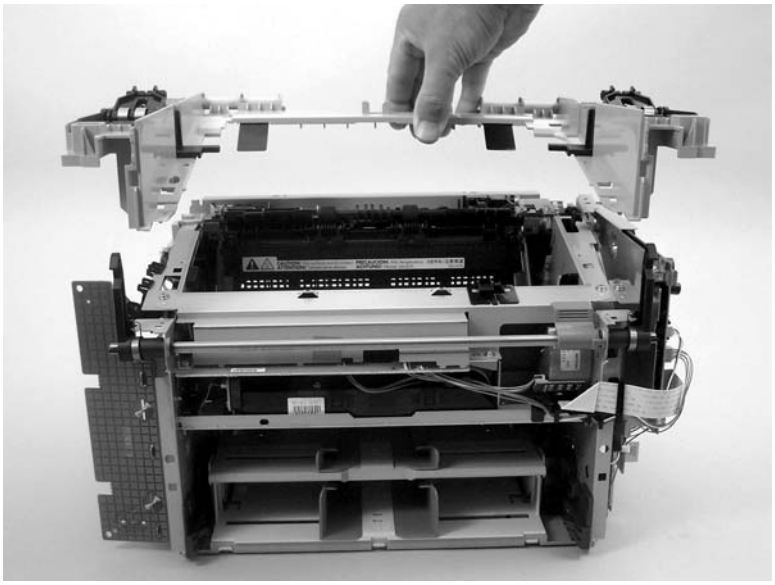
△ **CAUTION:** The ferrite is not captive in the bracket and can be dislodged when you remove the bracket.

Figure 5-60 Remove the scanner support frame (3 of 5)



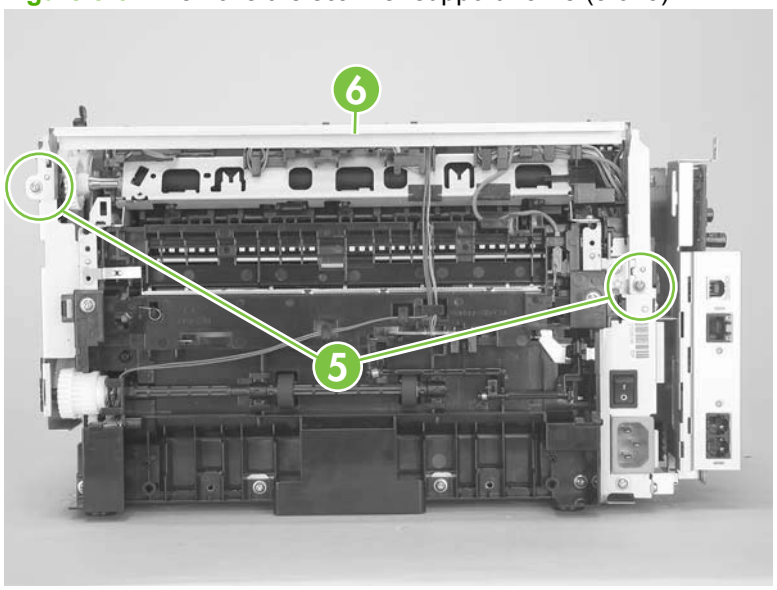
5. Lift the scanner support frame up and off of the product.

Figure 5-61 Remove the scanner support frame (4 of 5)



6. If you are removing the scanner support frame to gain access to the fuser, remove two screws (callout 5) and the chassis reinforcement bracket (callout 6).

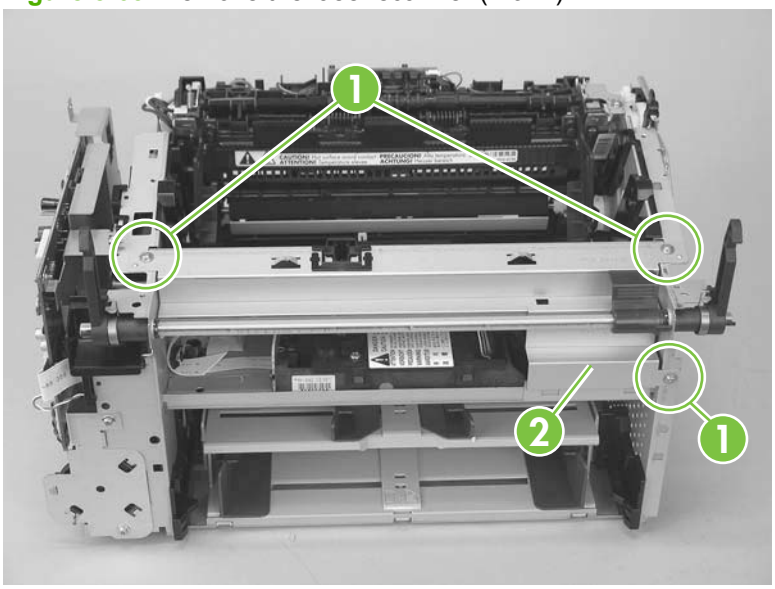
Figure 5-62 Remove the scanner support frame (5 of 5)



Laser/scanner assembly

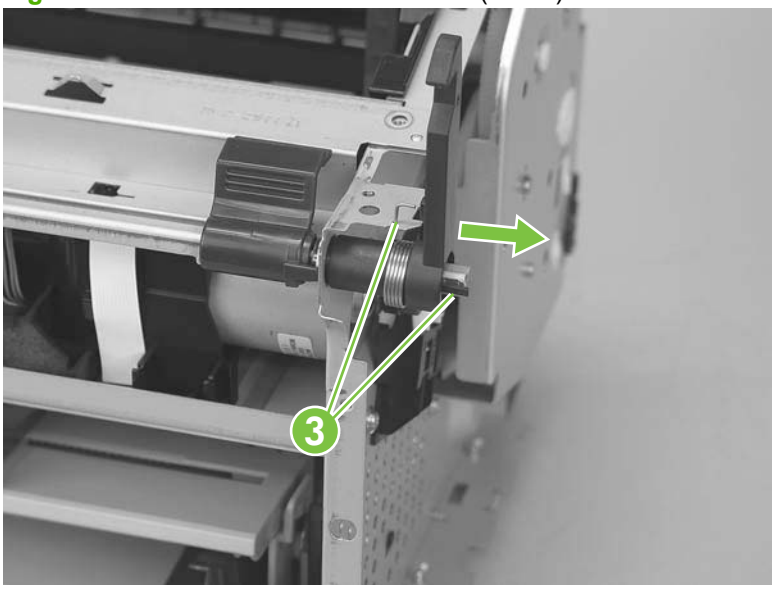
1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 60.
   - Right and left cover. See Side covers on page 74.
   - Print-cartridge door. See Print-cartridge door on page 76.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 77.
   - Front cover. See Front cover on page 79.
   - Scanner support frame. See Scanner support frame on page 86.
2. Remove three screws (callout 1) and one sheet-metal bracket (callout 2).

Figure 5-63 Remove the laser/scanner (1 of 7)



3. Release one tab and one spring (callout 3) and then remove right-side scanner-assembly locking lever.

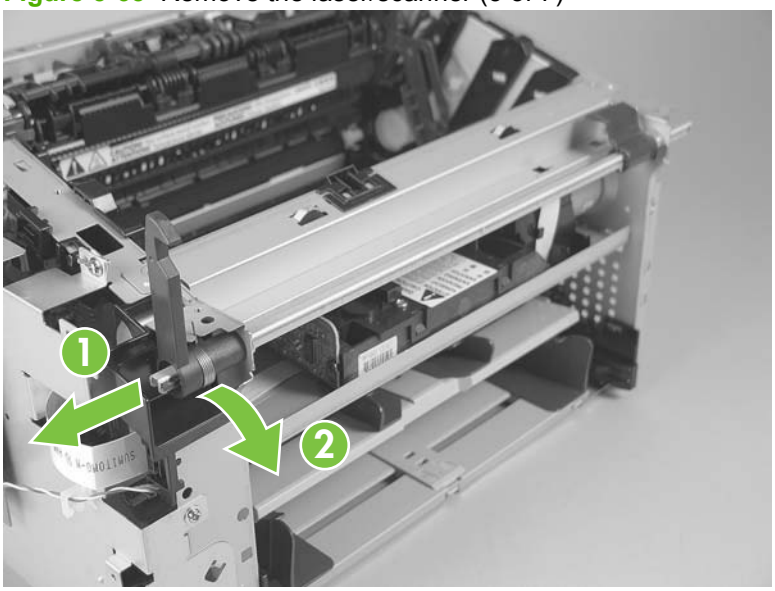
Figure 5-64 Remove the laser/scanner (2 of 7)



4. Push the shaft to the left to disengage it (you might need to release the left-side locking-lever spring), and then rotate the shaft towards the front of the product until the left-side scanner-assembly locking lever is in the down position.

NOTE: When the shaft is reinstalled, make sure that the locking levers and the cartridge-door button (mounted to the shaft near the right-side locking lever) are correctly positioned. Verify that the locking-lever tension springs are engaged in the slots in the chassis.

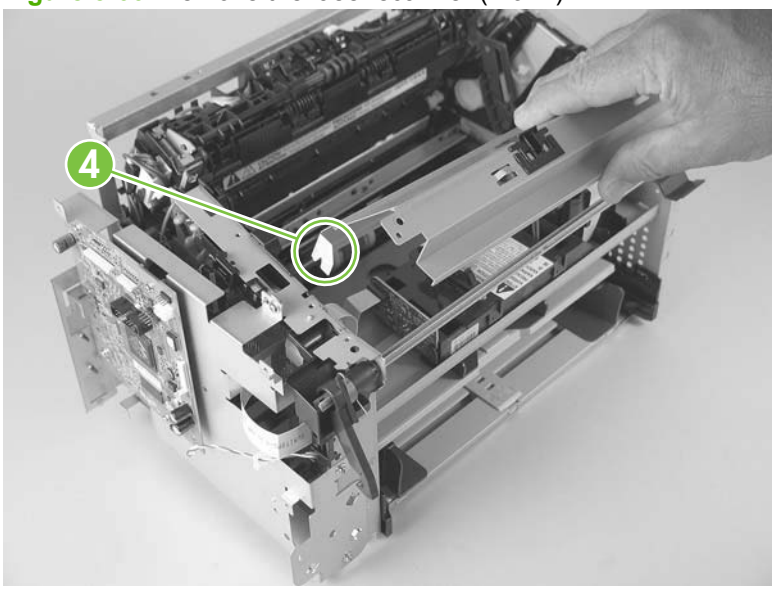
Figure 5-65 Remove the laser/scanner (3 of 7)



5. Lift the laser/scanner cover up and out of the product to remove it.

NOTE: When this cover is reinstalled, make sure that the slots in the lower portion of the cover (callout 4; one shown) fit over the edge of the laser/scanner mounting shelf so that the cover is secure and correctly fits inside the product.

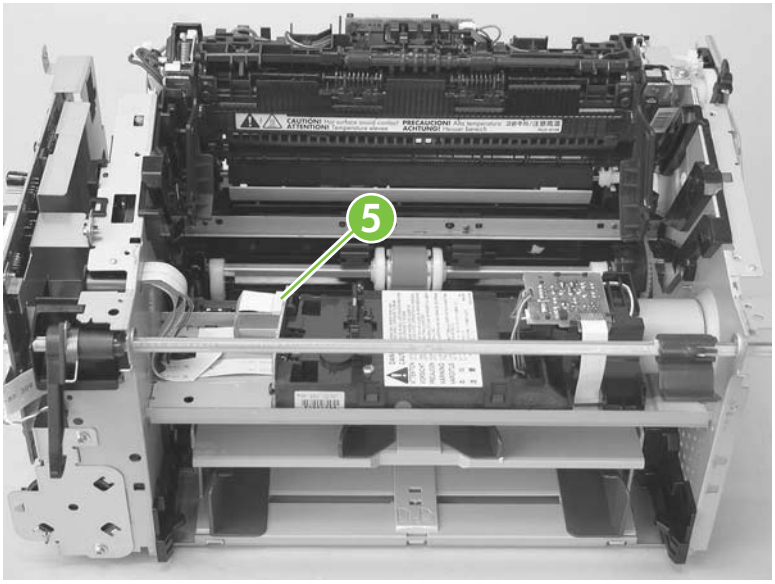
Figure 5-66 Remove the laser/scanner (4 of 7)



6. Disconnect one FFC (callout 5).

CAUTION: Do not bend or fold the FFCs during the removal or reinstallation process.

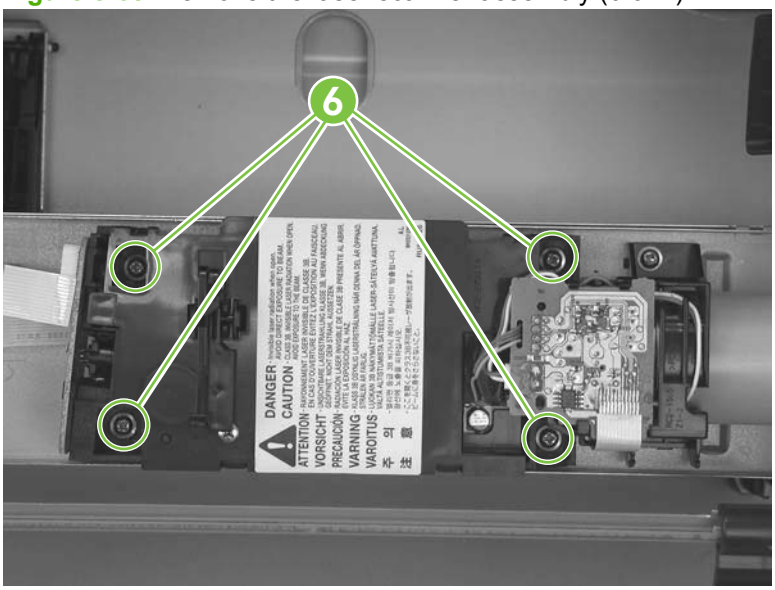
Figure 5-67 Remove the laser/scanner assembly (5 of 7)



7. Remove four screws (callout 6).

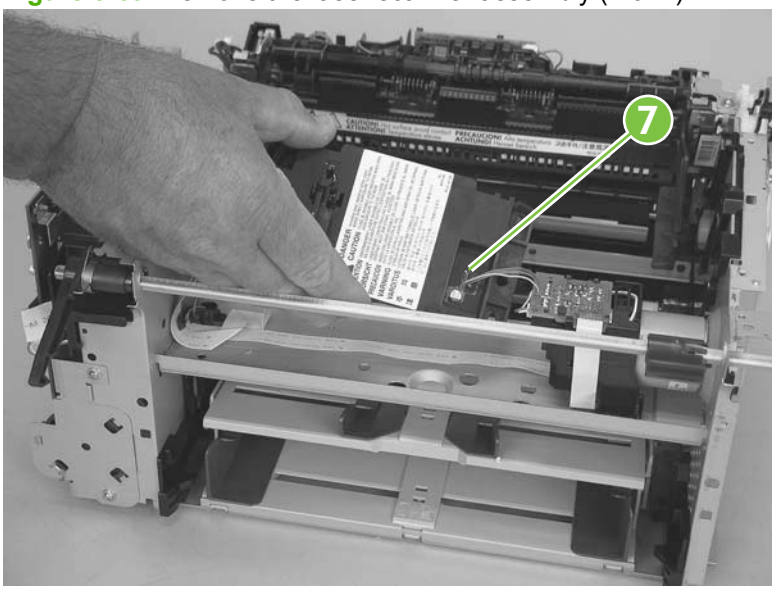
NOTE: These four screws are longer than most of the screws used in the product. Do not get them mixed up with screws from previously removed components.

Figure 5-68 Remove the laser/scanner assembly (6 of 7)



8. Carefully slide the laser/scanner assembly away from the main-motor PCA bracket, and then disconnect one wire-harness connector (callout 7). Remove the laser/scanner assembly.

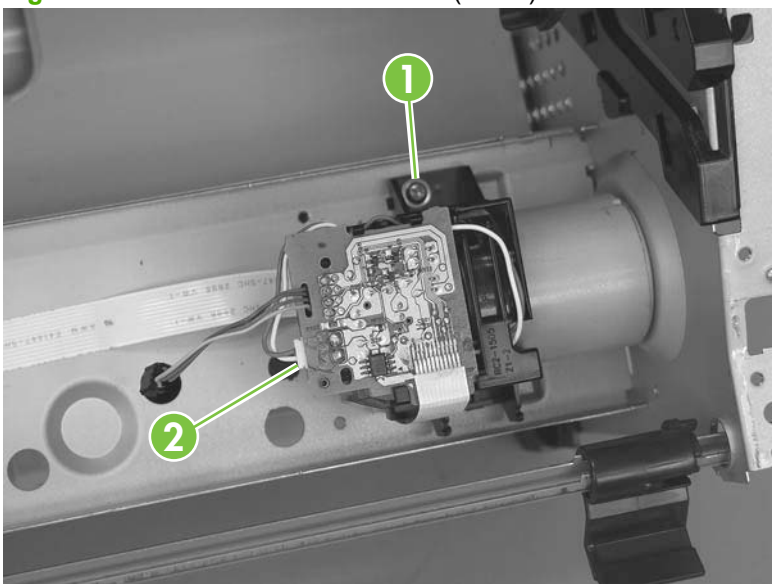
Figure 5-69 Remove the laser/scanner assembly (7 of 7)



Main motor

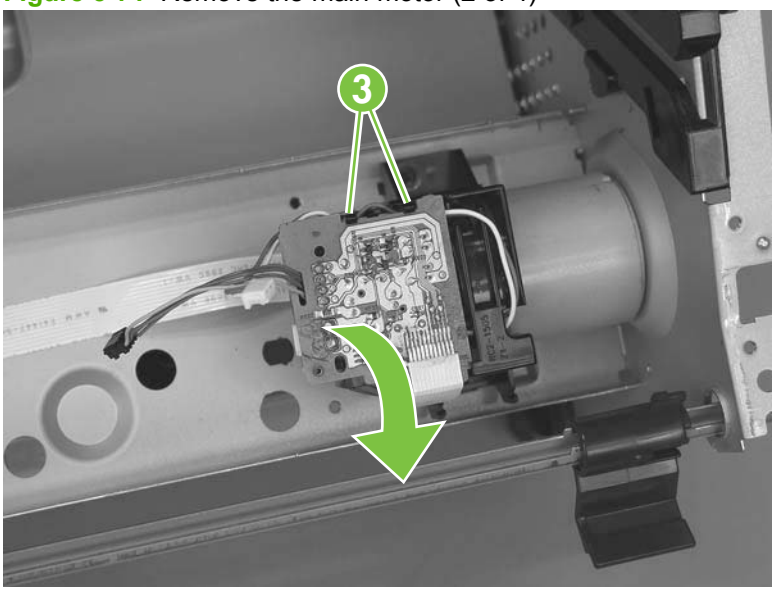
1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 60.
   - Formatter. See Formatter on page 81.
   - Right and left cover. See Side covers on page 74.
   - Print-cartridge door. See Print-cartridge door on page 76.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 77.
   - Front cover. See Front cover on page 79.
   - Scanner support frame. See Scanner support frame on page 86.
   - Laser/scanner assembly. See Laser/scanner assembly on page 89.
2. Remove one screw (callout 1), and then carefully disconnect one wire-harness connector (callout 2).

Figure 5-70 Remove the main motor (1 of 4)



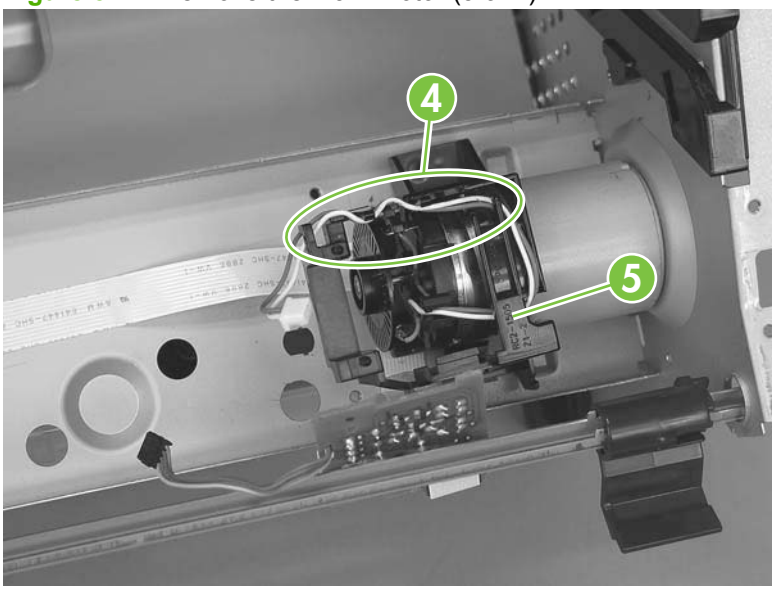
3. Carefully release two tabs (callout 3) and separate the main motor PCA from the mounting bracket.

Figure 5-71 Remove the main motor (2 of 4)



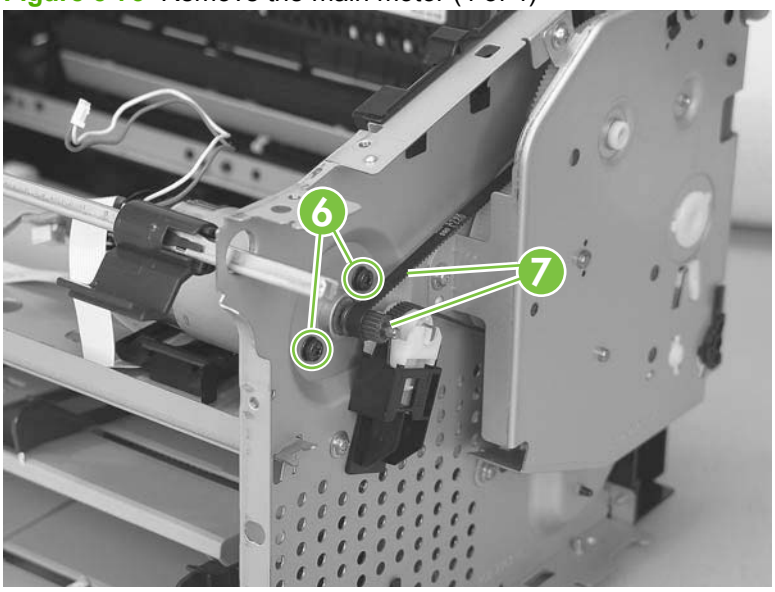
4. Remove the main-motor wire harness from the retainers on the mounting bracket (callout 4). Remove the bracket (callout 5).

Figure 5-72 Remove the main motor (3 of 4)



5. Remove two screws (callout 6). Carefully slip the main-motor drive belt off of the motor shaft (callout 7), and then remove the main motor.

Figure 5-73 Remove the main motor (4 of 4)



TIP: When the main motor is reinstalled, make sure that the wire harness is located toward the top of the motor so that the harness can be correctly positioned in the retainers on the motor PCA mounting bracket.

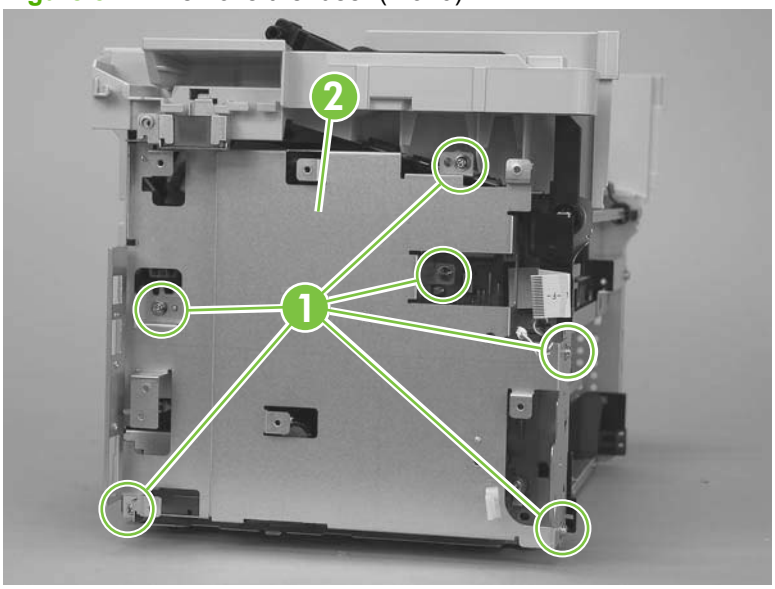
When you reinstall the main-motor drive belt, make sure that it is correctly positioned on top of the spring-loaded tension idler and that it is not twisted (the grooves in the belt should face inwards when the belt is correctly positioned).

Make sure that the FFC that is attached to the motor PCA is correctly positioned under the lower motor mounting bracket so that it will not interfere with the fan blade on the rear of the motor shaft.

Fuser

1. Remove the following assemblies:
   - Scanner assembly. See Scanner assembly on page 60.
   - Right and left covers. See Side covers on page 74.
   - Print-cartridge door. See Print-cartridge door on page 76.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 77.
   - Front cover. See Front cover on page 79.
   - Formatter. See Formatter on page 81.
   - Scanner support frame and chassis reinforcement plate. See Scanner support frame on page 86.
2. Remove six screws (callout 1) and the power supply sheet-metal plate (callout 2).

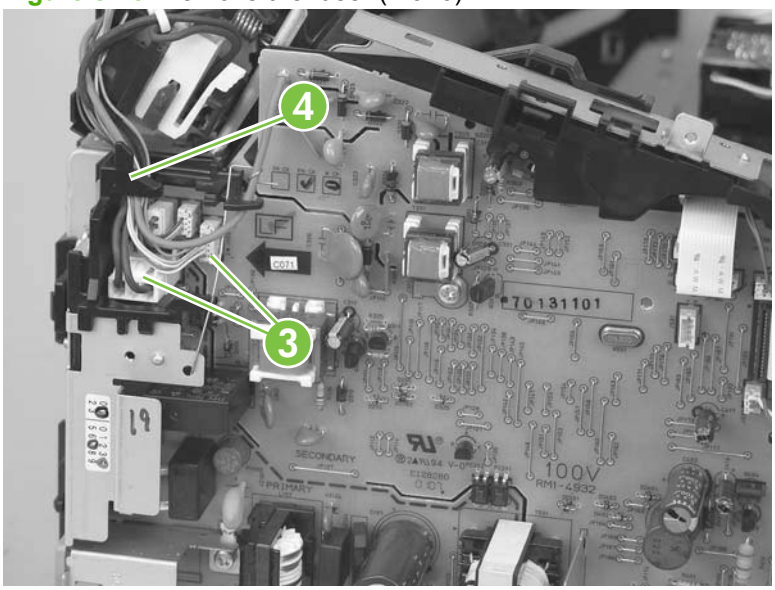
Figure 5-74 Remove the fuser (1 of 6)



3. Disconnect two wire-harness connectors (callout 3; J102, and J552) and remove the harnesses from the retainer (callout 4).

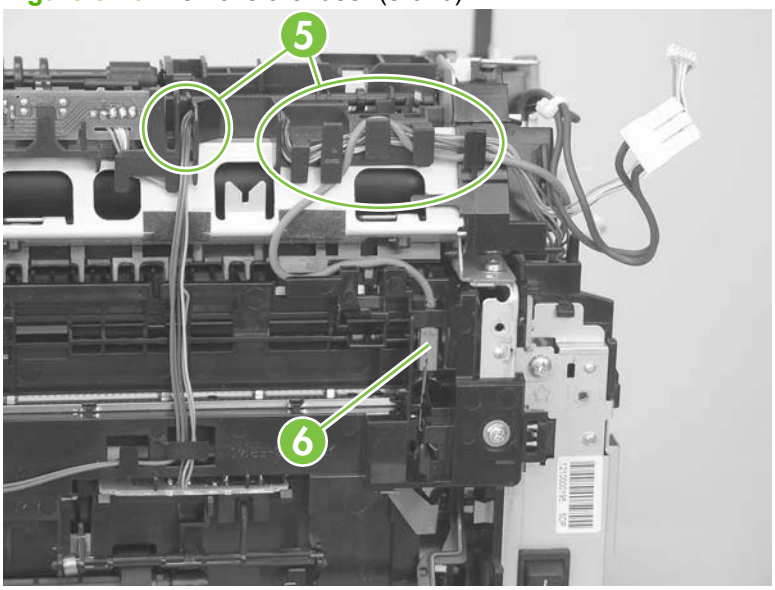
NOTE: You might need to disconnect and remove the other wire harnesses to remove the required harness from the retainer.

Figure 5-75 Remove the fuser (2 of 6)



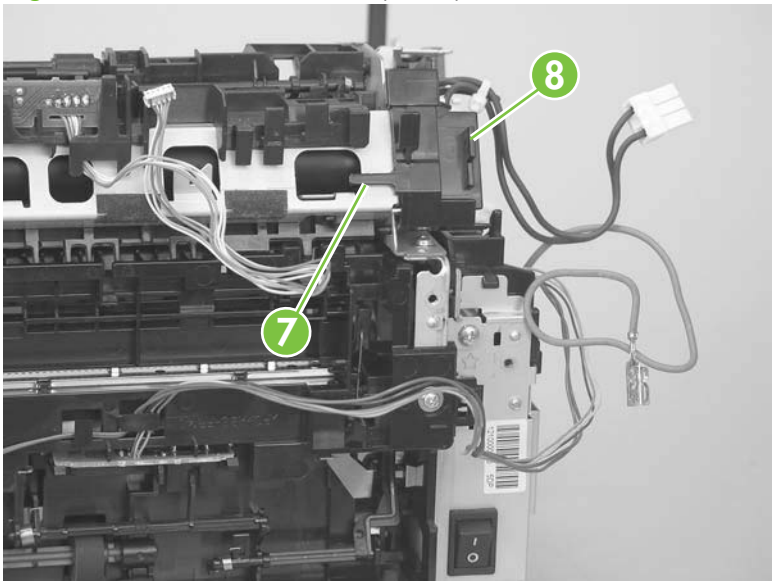
4. Release the wire harness from the retainer near the top of the fuser (callout 5) and disconnect the ground wire (callout 6) from the back of the product.

Figure 5-76 Remove the fuser (3 of 6)



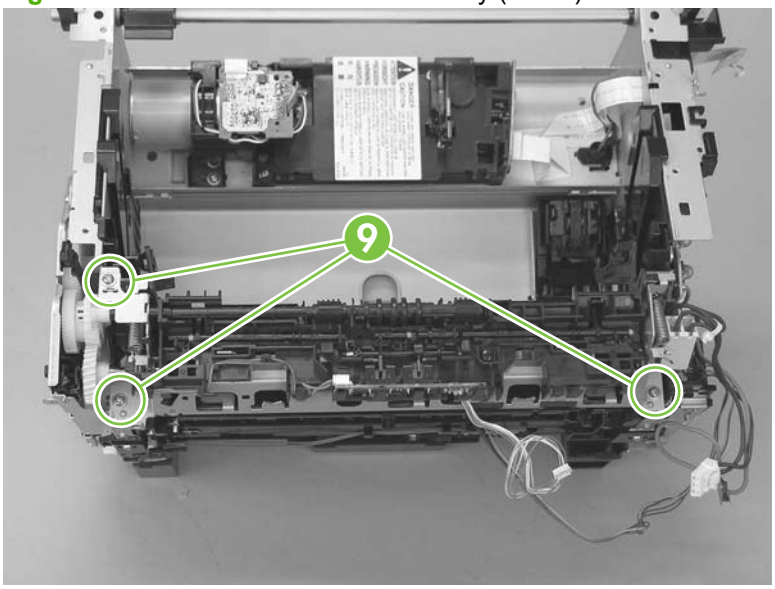
5. Release one tab (callout 7) and then remove the wire-harness retainer (callout 8).

Figure 5-77 Remove the fuser (4 of 6)



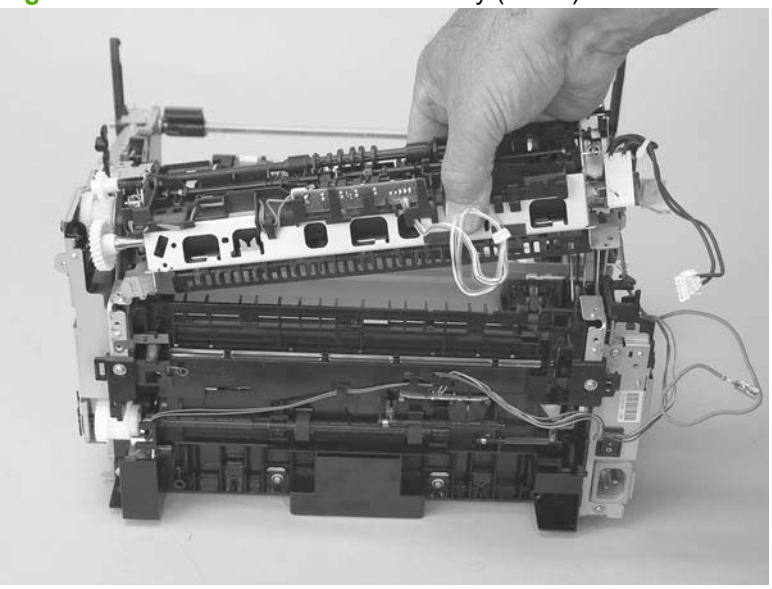
6. Remove three screws (callout 9).

Figure 5-78 Remove the fuser assembly (5 of 6)



7. Lift up the right side of the fuser assembly to release it from the chassis, and then remove the fuser assembly.

Figure 5-79 Remove the fuser assembly (6 of 6)

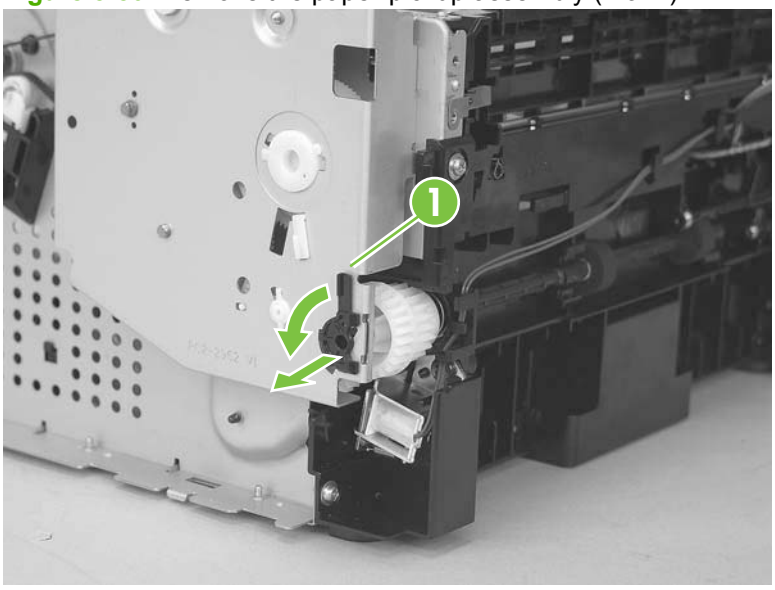


NOTE: When replacing the fuser assembly, be sure to transfer the delivery-sensor PCA from the old fuser to the new one.

Paper-pickup assembly

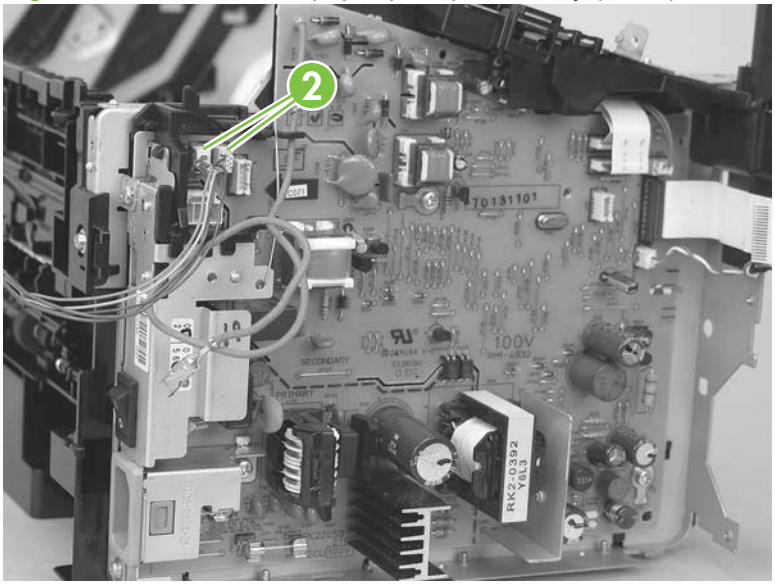
1. Remove the following assemblies:
   - Separation pad. See Separation pad on page 66.
   - Scanner assembly. See Scanner assembly on page 60.
   - Transfer roller. See Transfer roller on page 73.
   - Right and left cover. See Side covers on page 74.
   - Print-cartridge door. See Print-cartridge door on page 76.
   - Rear cover and fuser cover. See Rear cover and fuser cover on page 77.
   - Front cover. See Front cover on page 79.
   - Formatter. See Formatter on page 81.
   - Fuser. See Fuser on page 96.
2. Release one tab (callout 1). Rotate the paper-pickup drive-shaft locking clip until the clip retainers align with the holes in the chassis, and then remove the clip.

Figure 5-80 Remove the paper-pickup assembly (1 of 4)



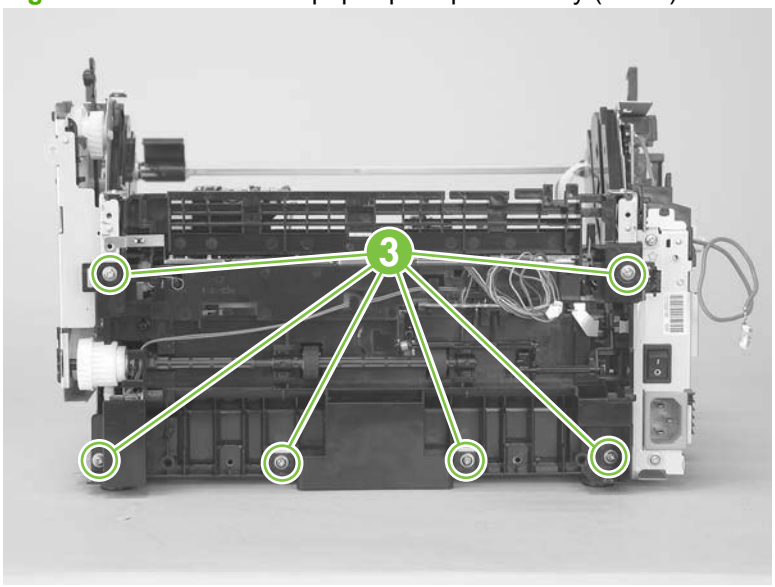
3. Disconnect two wire harnesses (callout 2; J551 and J556).

Figure 5-81 Remove the paper-pickup assembly (2 of 4)



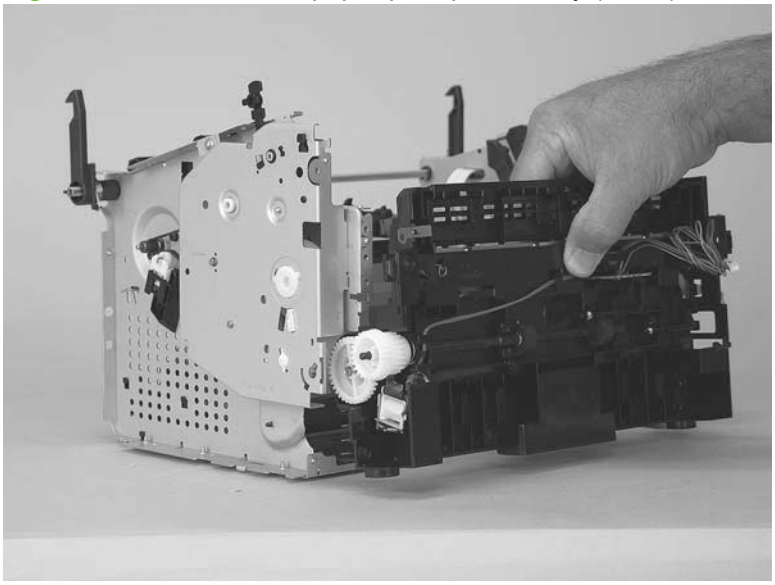
4. Remove six screws (callout 3).

Figure 5-82 Remove the paper-pickup assembly (3 of 4)



5. Separate the assembly from the chassis, and then remove it.

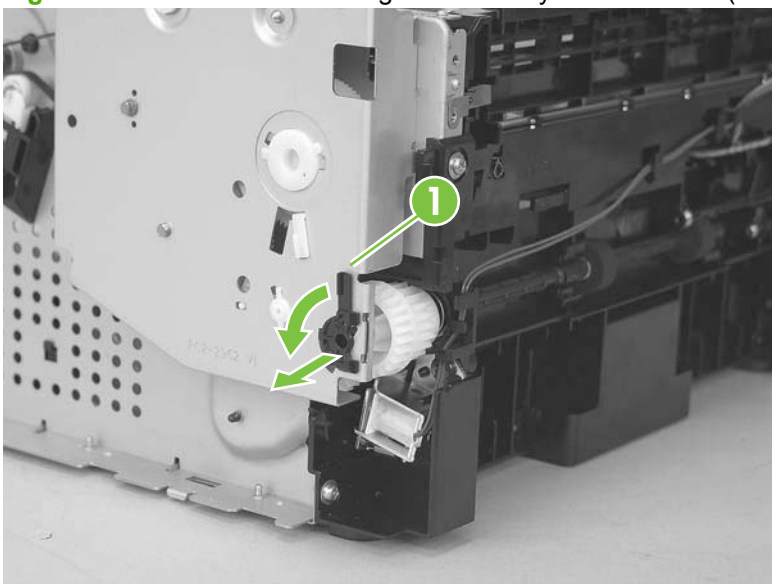
Figure 5-83 Remove the paper-pickup assembly (4 of 4)



Drive-gear assembly and drive belt

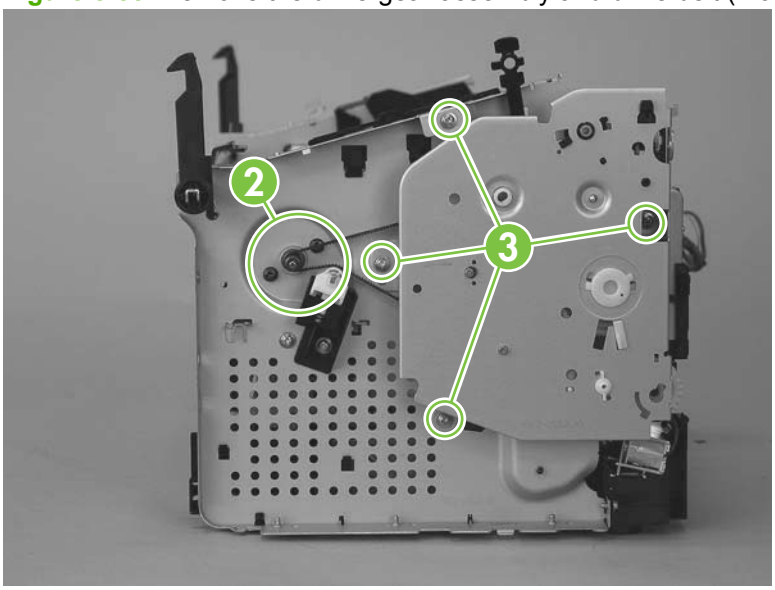
1. Release one tab (callout 1). Rotate the paper-pickup drive-shaft locking clip until the clip retainers align with the holes in the chassis, and then remove the clip.

Figure 5-84 Remove the drive-gear assembly and drive belt (1 of 4).



2. Carefully slip the drive belt off of the motor shaft (callout 2), and then remove four screws (callout 3).

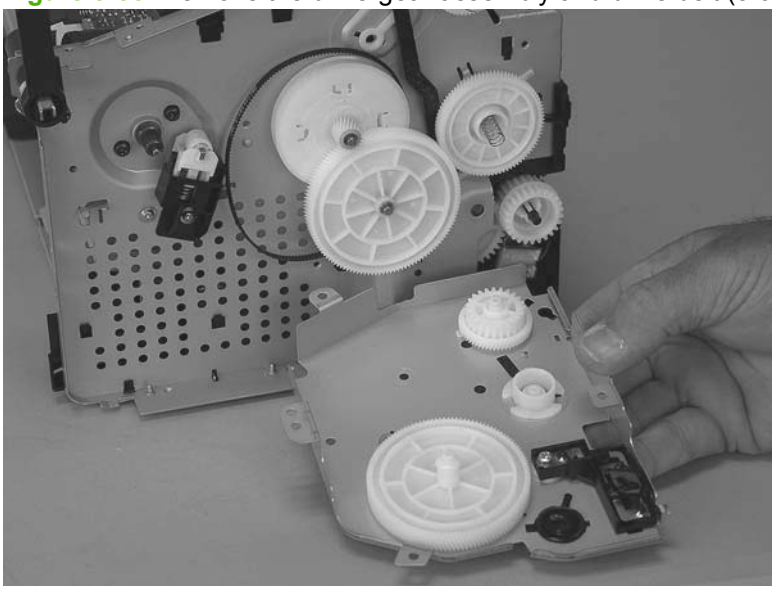
Figure 5-85 Remove the drive-gear assembly and drive belt (2 of 4).



3. Remove the drive-gear assembly.

△ **CAUTION:** Not all of the gears and springs are captive when you remove the drive-gear assembly. Make sure that you do not lose any of the springs or gears when the assembly is removed.

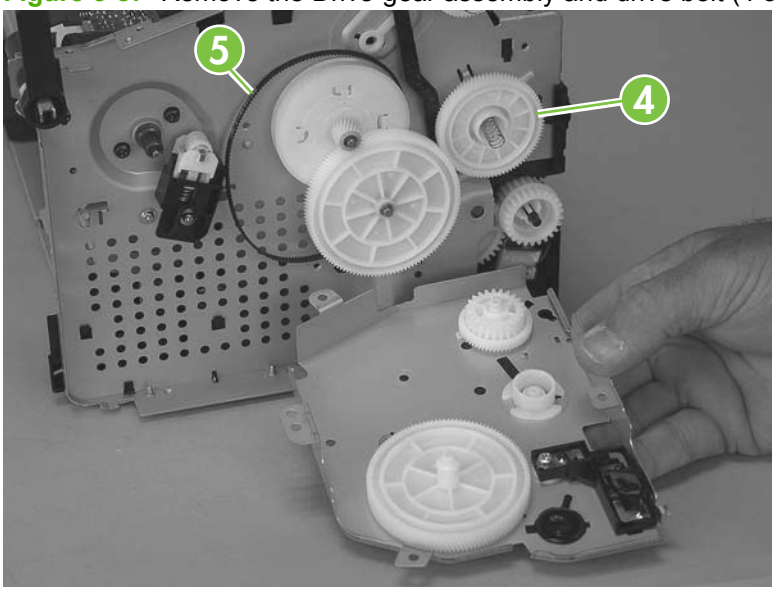
Figure 5-86 Remove the drive-gear assembly and drive belt (3 of 4).



4. Remove one gear (callout 4), and then carefully slip the drive belt (callout 5) off of the drive gear.

TIP: When you reinstall the main-motor drive belt, make sure that it is correctly positioned on top of the spring-loaded tension idler and that it is not twisted (the grooves in the belt should face inwards when the belt is correctly positioned).

Figure 5-87 Remove the Drive-gear assembly and drive belt (4 of 4).



6 Problem solve

- Problem-solving checklist
- Control-panel messages
- Clear jams
- Print problems
- Scan problems
- Copy problems
- Functional checks
- Service-mode functions
- Problem-solving tools
- Problem-solving diagrams
- Firmware updates

Problem-solving checklist

Follow these steps when trying to solve a problem with the product.

Step number	Verification step	Possible problems	Solutions
1	**Is the power on?**	No power due to failed power source, cable, switch, or fuse.	1. Verify that the product is plugged in. 2. Verify that the power cable is functional and that the power switch is on. 3. Check the power source by plugging the product directly into the wall or into a different outlet.
2	**Does Ready appear in the product control panel?** The control panel should function without error messages.	Control panel shows an error.	See Control-panel messages on page 108 for a list of common messages that will help you correct the error.
3	**Do information pages print?** Print a configuration page.	An error message appears on the control-panel display.	See Control-panel messages on page 108 for a list of common messages that will help you correct the error.
		Paper jams when printing.	Make sure that media that meets HP specifications. Clean the paper path. See Clean the paper path on page 29.
4	**Does the product copy?** Place the configuration page onto the flatbed scanner and make a copy. The copies should print without print-quality problems.	Paper jams when printing.	Make sure that media that meets HP specifications. Clean the paper path. See Clean the paper path on page 29.
		Poor copy quality from the flatbed.	1. Clean the flatbed glass. See Clean the flatbed scanner glass on page 28. 2. If, after performing the maintenance, the problem persists, see Copy problems on page 127.
5	**Does the product print from the computer?** Use a word-processing program to send a print job to the product.	Software is not installed correctly or an error occurred during software installation.	Uninstall and then reinstall the product software. Verify that you are using the correct installation procedure and the correct port setting.
		The cable is not connected correctly.	Reconnect the cable.
		An incorrect driver is selected.	Select the proper driver.
		There is a port driver problem in Microsoft Windows.	Uninstall and then reinstall the product software. Verify that you are using the correct installation procedure and the correct port setting.

Step number	Verification step	Possible problems	Solutions
6	**Does the product scan to the computer?** Initiate a scan from the basic desktop software at your computer.	The cable is not connected correctly.	Reconnect the cable.
		Software is not installed correctly or an error occurred during software installation.	Uninstall and then reinstall the product software. Verify that you are using the correct installation procedure and the correct port setting.
		If the error persists, turn off the product and then turn on the product.	

Control-panel messages

The majority of the control-panel messages are intended to guide the user through typical operation. The control-panel messages indicate the status of the current operation, and include a page count on the second line of the display, if appropriate. When the product is receiving print data or scanning commands, control-panel messages indicate this status. In addition, alert messages, warning messages, and critical error messages indicate situations that might require some action.

Alert and warning messages

Alert and warning messages appear temporarily and might require the user to acknowledge the message by pressing OK to resume or by pressing Cancel to cancel the job. With certain warnings, the job might not complete or the print quality might be affected. If the alert or warning message is related to printing and the auto-continue feature is on, the product will attempt to resume the printing job after the warning has appeared for 10 seconds without acknowledgement.

Alert and warning message tables

Control panel message	Description	Recommended action
Device error **Press [OK]**	The product experienced an internal communication error.	This is a warning message only. Job output might be affected.
Jam in print paper path alternates with **Open door and clear jam**	The product has detected a jam in the paper path.	Clear the jam from the area indicated on the product control panel, and then follow the control-panel instructions. See Clear jams on page 111.
Page too complex **Press [OK]**	The product could not print the current page because of its complexity.	Press OK to clear the message. Allow the product to finish the job, or press Cancel to cancel the job.
Printer jam **clear paper path**	The product has detected a jam in the input trays.	Clear the jam from the area indicated on the product control panel, and then follow the control panel instructions. See Clear jams on page 111.
Settings cleared	The product has cleared job settings.	Re-enter any appropriate job settings.

Critical error messages

Critical error messages can indicate some kind of failure. Turning off and then turning on the power might fix the problem. If a critical error persists, the product might require service.

Critical error message-tables

Control panel message	Description	Recommended action
50.1 Fuser Error **Turn off then on**	The product has experienced an internal hardware error.	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. If a surge protector is being used, remove it. Plug the product directly into the wall socket. 3. Turn on the power and wait for the product to initialize. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
50.2 Fuser Error **Turn off then on**	The product has experienced an internal hardware error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize. If a surge protector is being used, remove it. Plug the product directly into the wall socket. Use the power switch to turn the product on. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
50.3 Fuser Error **Turn off then on**	The product has experienced an internal hardware error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize. If a surge protector is being used, remove it. Plug the product directly into the wall socket. Use the power switch to turn the product on. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
50.8 Fuser Error **Turn off then on**	The product has experienced an internal hardware error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize. If a surge protector is being used, remove it. Plug the product directly into the wall socket. Use the power switch to turn the product on. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
50.9 Fuser Error **Turn off then on**	The product has experienced an internal hardware error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize.

Control panel message	Description	Recommended action
		If a surge protector is being used, remove it. Plug the product directly into the wall socket. Use the power switch to turn the product on. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
52 Scanner Error **Turn off then on**	The product has experienced a scanner error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize. If a surge protector is being used, remove it. Plug the product directly into the wall socket. Use the power switch to turn the product on. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
54.1C Error **Turn off then on**	The product has experienced an internal hardware error.	Turn off the power by using the power switch, wait at least 30 seconds, and then turn on the power and wait for the product to initialize. If a surge protector is being used, remove it. Plug the product directly into the wall socket. Use the power switch to turn the product on. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
Engine comm. Error	The product has experienced an internal hardware error.	1. Turn off the power by using the power switch, and then wait at least 30 seconds. 2. If a surge protector is being used, remove it. Plug the product directly into the wall socket. 3. Turn on the power and wait for the product to initialize. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.

Clear jams

Causes of jams

Occasionally, paper or other print media can become jammed during a print job. Some causes include the following events:

- The input trays are loaded improperly or overfilled, or the media guides are not set properly.
- Media is added to or removed from an input tray during a print job or an input tray is removed from the product during a print job.
- The cartridge door is opened during a print job.
- Too many sheets have accumulated in an output area, or sheets are blocking an output area.
- The print media that is being used does not meet HP specifications.
- The media is damaged or has foreign objects attached to it, such as staples or paper clips.
- The environment in which the print media was stored is too humid or too dry.

Where to look for jams

Jams can occur in these locations:

- In input areas
- In output areas
- In the print-cartridge area

Find and remove the jam by using the instructions on the following pages. If the location of the jam is not obvious, first look inside the product.

Loose toner might remain in the product after a jam. This problem typically resolves itself after a few sheets have been printed.

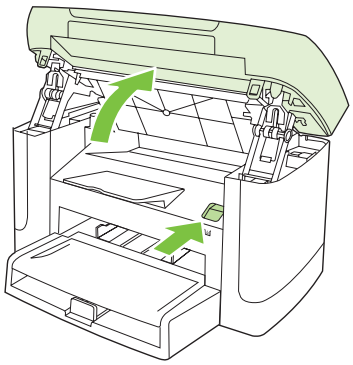
Clear jams from the input-tray areas

△ **CAUTION:** Do not use sharp objects, such as tweezers or needle-nose pliers, to remove jams. Damage caused by sharp objects will not be covered by the warranty.

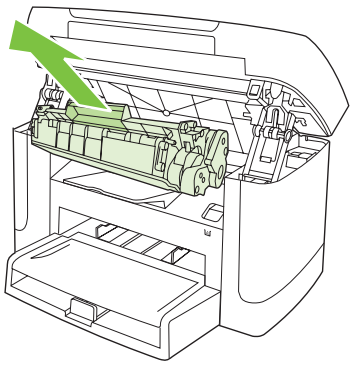
When removing jammed media, pull the jammed media straight away from the product. Pulling jammed media out of the product at an angle can damage the product.

NOTE: Depending on where the jam is located, some of the following steps might not be necessary.

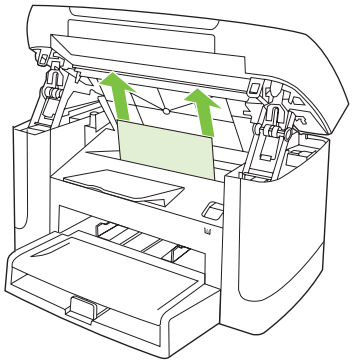
1. Open the print-cartridge door.



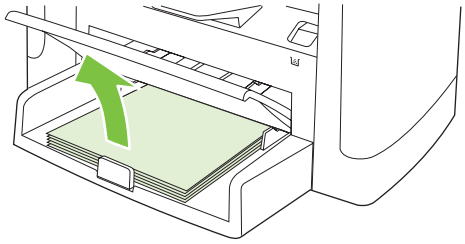
2. Grasp the handle on the print cartridge, and then pull the cartridge straight out to remove it.



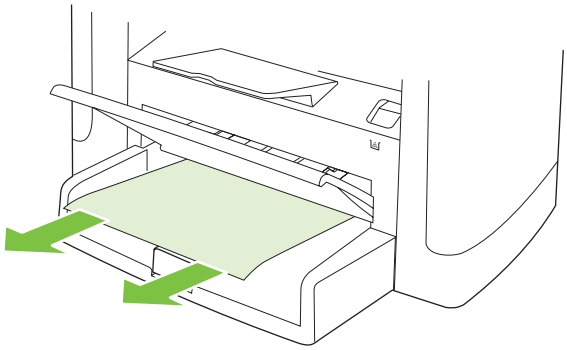
3. With both hands, grasp the side of the media that is most visible (this includes the middle), and carefully pull it free from the product.



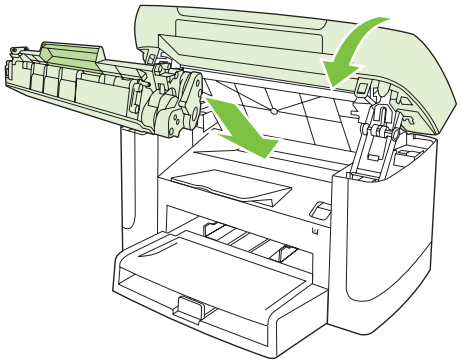
4. Open tray 1 and remove the media stack.



5. With both hands, grasp the side of the jammed media that is most visible (this includes the middle), and carefully pull it free from the product.



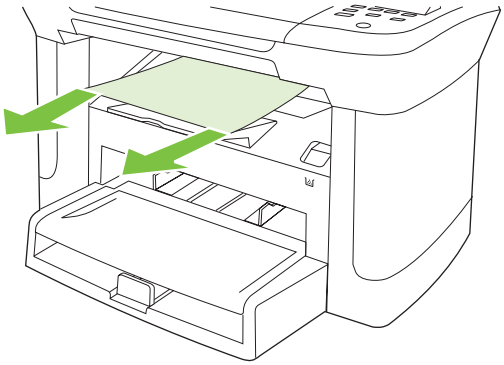
6. Replace the print cartridge and close the print-cartridge door.



Clear jams from the output bin

△ **CAUTION:** Do not use sharp objects, such as tweezers or needle-nose pliers, to remove jams. Damage caused by sharp objects will not be covered by the warranty.

With both hands, grasp the side of the jammed media that is most visible (this includes the middle), and carefully pull it free from the product.

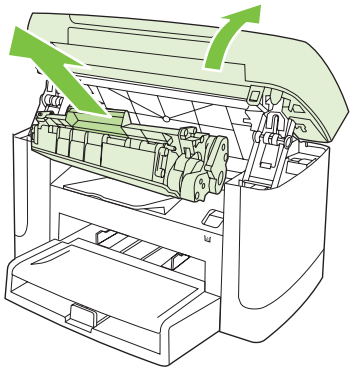


Clear jams from the print-cartridge area

△ **CAUTION:** Do not use sharp objects, such as tweezers or needle-nose pliers, to remove jams. Damage caused by sharp objects will not be covered by the warranty.

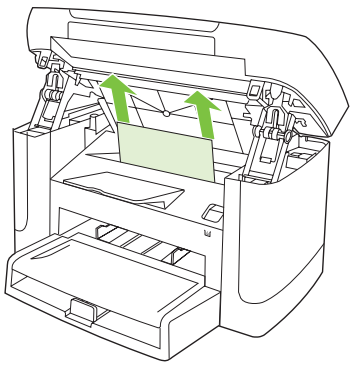
When removing jammed media, pull the jammed media straight away from the product. Pulling jammed media out of the product at an angle can damage the product.

1. Open the print-cartridge door, and remove the print cartridge.

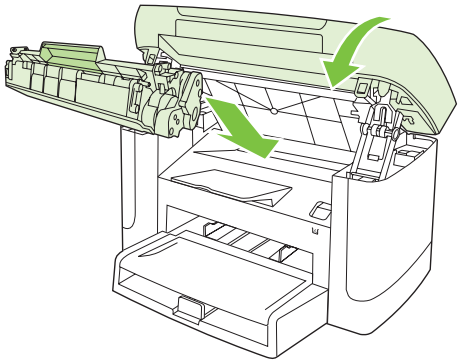


△ **CAUTION:** To prevent damage to the print cartridge, minimize its exposure to direct light.

2. With both hands, grasp the side of the jammed media that is most visible (this includes the middle), and carefully pull it free from the product.



3. Replace the print cartridge and close the print-cartridge door.



Avoid repeated jams

- Verify that the input tray is not overfilled. The input tray capacity varies depending on the type of print media that you are using.
- Verify that the media guides are properly adjusted.
- Check that the input tray is securely in place.
- Do not add print media into the input tray while the product is printing.
- Use only HP-recommended media types and sizes.
- Do not fan media prior to loading it in a tray. To loosen the ream, hold it firmly in both hands and twist the media by rotating your hands in the opposite direction.
- Do not let print media stack up in the output bin. The print media type and the amount of toner used affect the output bin capacity.
- Check the power connection. Make sure that the power cord is firmly connected to both the product and the power supply box. Plug the power cord into a grounded power outlet.

Print problems

Print-quality problems

The information in the following sections helps you identify and resolve print-quality issues.

NOTE: If you are having copy problems, see Copy problems on page 127.

Improve print quality

Use the print-quality settings to prevent print-quality problems.

Print-quality settings

Print-quality settings affect how light or dark the print is on the page and the style in which the graphics are printed. You can also use the print-quality settings to optimize the print quality for a specific media type.

You can change the settings in the product properties to accommodate the types of jobs that you are printing. The following settings are available, depending on the printer driver that you are using:

- **600 dpi**
- **FastRes 1200**

NOTE: Changing the resolution can change the formatting of your text.

Temporarily change print-quality settings

To change the print-quality settings only for the current software program, open the properties through the **Print Setup** menu in the program that you are using to print.

Change print-quality settings for all future jobs

NOTE: For Macintosh instructions, see the user guide.

For Windows 2000:

1. In the Windows system tray, click **Start**, select **Settings**, and then click **Printers**.
2. Right-click the product icon.
3. Click **Properties** (in Windows 2000, you can also click **Printing Preferences**).
4. Change the settings, and then click **OK**.

For Windows XP:

1. In the Windows system tray, click **Start**, click **Control Panel**, and then click **Printers and Faxes**.
2. Right-click the product icon.
3. Click **Properties**, or click **Printing Preferences**.
4. Change the settings, and then click **OK**.

For Windows Vista:

1. In the Windows system tray, click **Start**, click **Control Panel**, and then click **Printer**.
2. Right-click the product icon.
3. Click **Properties**, or click **Printing Preferences**.
4. Change the settings, and then click **OK**.

Identify and correct print defects

Use the checklist and print-quality issues charts in this section to solve print-quality problems.

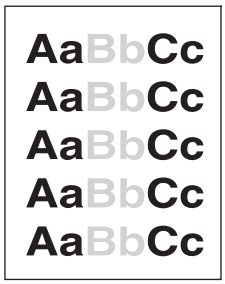
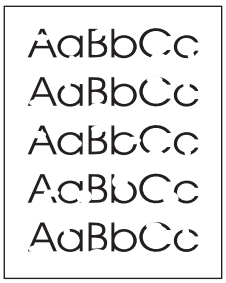
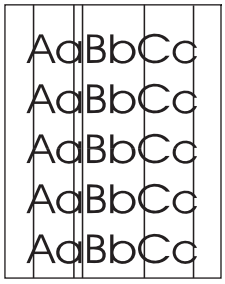
Print-quality checklist

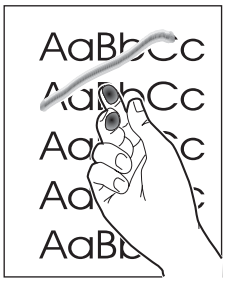
General print-quality problems can be solved by using the following checklist:

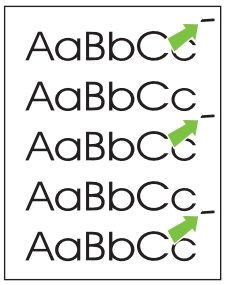
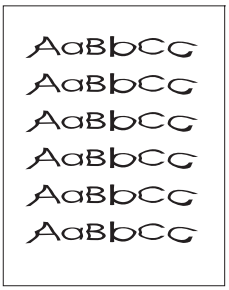
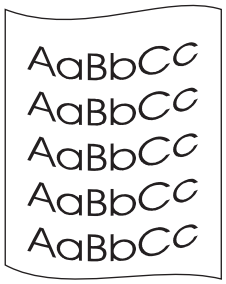
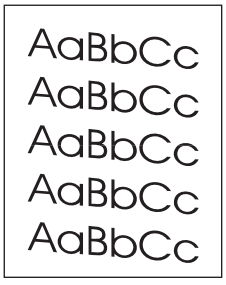
1. Make sure that the paper or print media that you are using meets specifications. Generally, smoother paper provides better results.
2. If you are using a special print media such as labels, transparencies, glossy, or letterhead, ensure that you have printed by type.
3. Print a configuration page at the product control panel. If the page does not print correctly, the problem is with the hardware. Contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
4. Print a demo page at the control panel. If the page prints, the problem is with the printer driver. Try printing from another printer driver.
5. Try printing from a different program. If the page prints correctly, the problem is with the program from which you were printing.
6. Restart the computer and the product, and then try printing again. If the problem is not resolved, see General print-quality issues on page 120.

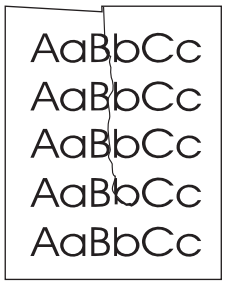
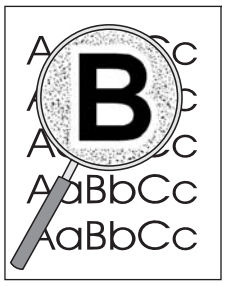
General print-quality issues

The following examples depict letter-size paper that has passed through the product short-edge-first. These examples illustrate problems that would affect all of the pages that you print. The topics that follow list the typical cause and solution for each of these examples.

Problem	Example	Cause	Solution
Print is light or faded.		The media might not meet HP specifications.	Use media that meets HP specifications.
		The print cartridge might be defective. If you use a non-HP print cartridge, no messages appear on the product control panel.	Replace the print cartridge. See Print cartridge on page 25. If the print cartridge is not low or empty, inspect the toner roller to see if the roller is damaged. If it is, replace the print cartridge.
		If the whole page is light, the print density adjustment is too light or EconoMode might be turned on.	Adjust the print density, and disable EconoMode in the product Properties.
Toner specks appear.		The media might not meet HP specifications.	Use media that meets HP specifications.
		The paper path might need cleaning.	Clean the paper path. See Clean the paper path on page 29.
Dropouts appear.		A single sheet of print media might be defective.	Try reprinting the job.
		The moisture content of the paper is uneven or the paper has moist spots on its surface.	Try different paper, such as high-quality paper that is intended for laser printers.
		The paper lot is flawed. The manufacturing processes can cause some areas to reject toner.	
		The print cartridge might be defective.	Replace the print cartridge. See Print cartridge on page 25. If the error persists, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
Vertical streaks or bands appear on the page.		The print cartridge might be defective. If you are using a non-HP print cartridge, no messages appear on the product control panel.	Replace the print cartridge. See Print cartridge on page 25.

Problem	Example	Cause	Solution
The amount of background toner shading becomes unacceptable.		The media might not meet HP specifications.	Use a different paper with a lighter basis weight.
		The priority input tray might be installed incorrectly.	Make sure that the priority input tray is in place.
		The print-density setting is too high.	Decrease the print-density setting through the print driver. This decreases the amount of background shading.
		Very dry (low humidity) conditions can increase the amount of background shading.	Check the product environment.
		The print cartridge might be defective. If you are using a non-HP print cartridge, no messages appear on the product control panel.	Replace the print cartridge. See Print cartridge on page 25.
Toner smears appear on the media.		The media might not meet HP specifications.	Use media that meets HP specifications.
		If toner smears appear on the leading edge of the paper, the media guides are dirty, or debris has accumulated in the print path.	Clean the media guides and the paper path. See Clean the paper path on page 29.
		The fuser temperature might be too low.	In the printer driver, make sure the appropriate media type is selected.
The toner smears easily when touched.		The product is not set to print on the type of media on which you want to print.	In the printer driver, select the **Paper/Quality** tab and set **Paper Type** to match the type of media on which you are printing. Print speed might be slower if you are using heavy paper.
		The media might not meet HP specifications.	Use media that meets HP specifications.
		The paper path might need cleaning.	Clean the paper path. See Clean the paper path on page 29.
		The power source might be defective.	Plug the product directly into an AC outlet instead of into a power strip.
		The fuser temperature might be too low.	Use the archive print feature to improve toner fusing.

Problem	Example	Cause	Solution
Marks repeatedly appear at even intervals on the page.		The product is not set to print on the type of media on which you want to print.	In the printer driver, make sure that the appropriate media type is selected. Print speed might be slower if you are using heavy paper.
		Internal parts might have toner on them.	The problem typically corrects itself after a few more pages.
		The paper path might need cleaning.	Clean the paper path. See Clean the paper path on page 29.
		The print cartridge might be damaged.	If a repetitive mark occurs at the same spot on the page, install a new HP print cartridge. See Print cartridge on page 25.
The printed page contains misformed characters.		The media might not meet HP specifications.	Use a different paper, such as high-quality paper that is intended for laser printers.
		If characters are incorrectly formed so that they produce a wavy effect, the laser scanner might need service.	Verify that the problem also occurs on the configuration page. If so, contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
The printed page is curled or wavy.		The product is not set to print on the type of media on which you want to print.	In the printer driver, make sure the appropriate media type is selected. If the problem persists, select a media type that uses a lower fuser temperature, such as transparencies or light media.
		The media might have been in the input tray too long.	Turn over the stack of media in the tray. Also, try rotating the media 180° in the input tray.
		The media might not meet HP specifications.	Use a different paper, such as high-quality paper that is intended for laser printers.
		Both high temperature and humidity can cause paper curl.	Check the product environment.
Text or graphics are skewed on the printed page.		The media might be loaded incorrectly or the input tray might be too full.	Verify that the media is loaded correctly and that the media guides are not too tight or too loose against the stack. See Install input devices on page 19.
		The media might not meet HP specifications.	Use a different paper, such as high-quality paper that is intended for laser printers.

Problem	Example	Cause	Solution
The printed page contains wrinkles or creases.		The media might be loaded incorrectly or the input tray might be too full.	Turn over the stack of paper in the input tray, or try rotating the paper 180° in the input tray. Verify that the media is loaded correctly and that the media guides are not too tight or too loose against the stack. See Install input devices on page 19.
		The media might not meet HP specifications.	Use a different paper, such as high-quality paper that is intended for laser printers.
		Air pockets inside envelopes can cause them to wrinkle.	Remove the envelope, flatten it, and try printing again.
Toner appears around the printed characters.		The media might be loaded incorrectly.	Turn over the stack of paper in the tray.
		If large amounts of toner have scattered around the characters, the paper might have high resistivity.	Use a different paper, such as high-quality paper that is intended for laser printers.
An image that appears at the top of the page (in solid black) repeats farther down the page (in a gray field).		Software settings might affect image printing.	In your software program, change the tone (darkness) of the field in which the repeated image appears. In your software program, rotate the whole page 180° to print the lighter image first.
		The order of images printed might affect printing.	Change the order in which the images are printed. For example, have the lighter image at the top of the page, and the darker image farther down the page.
		A power surge might have affected the product.	If the defect occurs later in a print job, turn the product off for 10 minutes, and then turn on the product to restart the print job.

Scan problems

Solve scanned-image problems

Problem	Cause	Solution
The scanned image is of poor quality.	The original might be a second-generation photo or picture.	• To eliminate the patterns, try reducing the size of the image after scanning. • Print the scanned image to see if the quality is better. • Verify that the resolution settings are correct for the type of scan job that you are performing.
	The image that appears on the screen might not be an accurate representation of the quality of the scan.	• Try adjusting your computer monitor settings to use more colors (or levels of gray). Typically, you make this adjustment by opening **Display** in Windows Control Panel. • Try adjusting the resolution settings in the scanner software.
	The original might have been loaded incorrectly.	Verify that the original is loaded correctly on the flatbed scanner. See Install input devices on page 19.
	The scanner might be dirty.	Clean the scanner. See Clean the flatbed scanner glass on page 28.
	The graphics settings might not be suitable for the type of scan job that you are performing.	Try changing the graphics settings.
Part of the image did not scan.	The original might have been loaded incorrectly.	Verify that the original is loaded correctly on the flatbed scanner.
	A colored background might be causing images in the foreground to blend into the background.	Try adjusting the settings before you scan the original or enhancing the image after you scan the original.
	The original is too small.	The minimum size that the flatbed scanner supports is 25 x 25 mm (1 x 1 inch).
	The media size is incorrect.	In **Scan** settings, make sure that the input media size is large enough for the document that you are scanning. .

Problem	Cause	Solution
The scan takes too long	The resolution or color level is set too high.	Change the resolution and color settings to the correct settings for your job.
	The software is set to scan in color.	The system default is color, which takes longer to scan even when scanning a monochrome original. If you acquire an image through TWAIN or WIA, you can change the settings so that the original scans in grayscale or black-and-white. See the product software Help for details.
	A print job or copy job was sent before you tried to scan.	If someone sent a print job or copy job before you tried to scan, the scan will start if the scanner is not busy. However, because the product and scanner share memory, the scan might be slower.

Scan-quality problems

Prevent problems

The following are a few simple steps you can take to improve copy and scan quality.

- Use high-quality originals.
- Place the media on the flatbed glass correctly (face-down with the upper-left corner of the document at the corner of the glass indicated by the icon).
- Adjust the software settings according to how you plan to use the scanned page.
- If your product frequently feeds more than one page at a time, the separation pad might need to be replaced. Contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
- Use or make a carrier sheet to protect your originals.

Solve scan-quality problems

Problem	Cause	Solution
Blank pages	The original might have been loaded upside down.	On the flatbed scanner, place the original document face-down with the upper-left corner of the document at the corner of the glass indicated by the icon on the scanner.
Too light or dark	The resolution and color levels may be set incorrectly.	Verify that you have the correct resolution and color settings.
Unwanted spots	Ink, glue, correction fluid, or an unwanted substance might be on the glass.	Clean the flatbed scanner surface. See Clean the flatbed scanner glass on page 28.
Black dots	Ink, glue, correction fluid, or an unwanted substance might be on the glass.	Clean the flatbed scanner surface. See Clean the flatbed scanner glass on page 28.
	The power to the product might have fluctuated.	Reprint the job.
Unclear text	The resolution levels might be set incorrectly.	Verify that the correct resolution settings are correct.

Copy problems

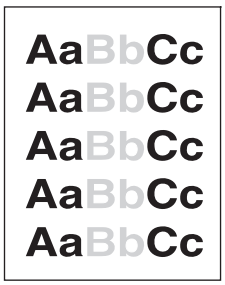
Prevent problems

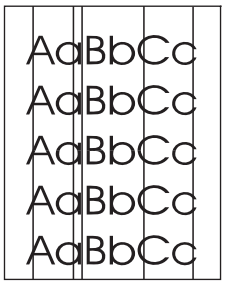
The following are a few simple steps you can take to improve copy quality:

- Use quality originals.
- Place the media on the flatbed glass correctly (face-down with the upper-left corner of the document at the corner of the glass indicated by the icon).
- Use or make a carrier sheet to protect your originals.

NOTE: Verify that the media meets HP specifications. If the media meets HP specifications, recurring feed problems indicate the pickup roller or separation pad is worn.

Image problems

Problem	Cause	Solution
Images are missing or faded.	The print-cartridge might be defective.	Replace the print cartridge. See Print cartridge on page 25.
	The original might be of poor quality.	If your original is too light or damaged, the copy might not be able to compensate, even if you adjust the contrast. If possible, find an original document in better condition.
	The contrast settings might be set incorrectly.	Use the control-panel Lighter/Darker button to change the contrast setting.
	The original might have a colored background.	Colored backgrounds might cause images in the foreground to blend into the background, or the background might appear in a different shade. If possible, use an original document without a colored background.
Vertical white or faded stripes appear on the copy.  	The media might not meet HP specifications.	Use media that meets HP specifications.
	The print-cartridge might be defective.	Replace the print cartridge. See Print cartridge on page 25.

Problem	Cause	Solution
Unwanted lines or dots appear on the copy.  	The flatbed scanner might be dirty.	Clean the flatbed scanner. See Clean the flatbed scanner glass on page 28.
	The photosensitive drum inside the print cartridge might have been scratched.	Install a new HP print cartridge. See Print cartridge on page 25.
Black dots or streaks appear on the copy.	Ink, glue, correction fluid, or an unwanted substance might be on the flatbed scanner.	Clean the flatbed scanner. See Clean the flatbed scanner glass on page 28.
	The power to the product might have fluctuated.	Reprint the job.
Copies are too light or dark.	The printer driver or product software settings may be incorrect.	Verify that the quality settings are correct. See the product software Help for more information about changing the settings.
Text is unclear.	The printer driver or product software settings may be incorrect.	Verify that the quality settings are correct. Verify that the EconoMode setting is off. See the product software Help for more information about changing the settings.

Media-handling problems

Problem	Cause	Solution
Poor print quality or toner adhesion	The paper is too moist, too rough, too heavy or too smooth, or it is embossed or from a faulty paper lot.	Try another kind of paper, between 100 and 250 Sheffield, 4 to 6% moisture content.
Dropouts, jamming, or curl	The paper has been stored incorrectly.	Store paper flat in its moisture-proof wrapping.
	The paper has variability from one side to the other.	Turn the paper over.
Excessive curl	The paper is too moist, has the wrong grain direction, or is of short-grain construction	Use long-grain paper.
	The paper varies from side-to-side.	Turn the paper over.
Jamming, damage to paper	The paper has cutouts or perforations.	Use paper that is free of cutouts or perforations.

Problem	Cause	Solution
Problems with feeding	The paper has ragged edges.	Use high-quality paper that is made for laser printers.
	The paper varies from side-to-side.	Turn the paper over.
	The paper is too moist, too rough, too heavy or too smooth, has the wrong grain direction, or is of short-grain construction or it is embossed or from a faulty paper lot.	Try another kind of paper, between 100 and 250 Sheffield, 4 to 6% moisture content.
		Use long-grain paper.
Print is skewed (crooked).	The media guides might be incorrectly adjusted.	Remove all media from the input tray, straighten the stack, and then load the media in the input tray again. Adjust the media guides to the width and length of the media that you are using and try printing again.
More than one sheet feeds at one time.	The media tray might be overloaded.	Remove some of the media from the tray. See Install input devices on page 19.
	The media might be wrinkled, folded, or damaged.	Verify that the media is not wrinkled, folded, or damaged. Try printing on media from a new or different package.
The product does not pull media from the media input tray.	The product might be in manual feed mode.	• If **Manual** appears on the product control-panel display, press OK to print the job. • Verify that the product is not in manual feed mode and print your job again.
	The pickup roller might be dirty or damaged.	Contact HP. See www.hp.com/support/LJM1120 or the support flyer that came in the product box.
	The paper-length adjustment control in tray 1 is set at a length that is greater than the media size.	Adjust the paper-length adjustment control to the correct length.

Performance problems

Problem	Cause	Solution
No copy came out.	The input tray might be empty.	Load media in the product. See Install input devices on page 19 for more information.
	The original might have been loaded incorrectly.	On the flatbed scanner, place the original document face-down with the upper-left corner of the document at the corner of the glass indicated by the icon on the scanner.
Copies are blank.	The sealing tape might not have been removed from the print cartridge.	Remove the print cartridge from the product, pull out the sealing tape, and reinstall the print cartridge.
	The original might have been loaded incorrectly.	On the flatbed scanner, make sure that the original document is placed face-down with the upper-left corner of the document at the corner of the glass indicated by the icon on the scanner.
	The media might not meet HP specifications.	Use media that meets HP specifications.
	The print cartridge might be defective.	Replace the print cartridge. See Print cartridge on page 25.
Copies are reduced in size.	The product settings might be set to reduce the scanned image.	On the control panel, press Reduce/ Enlarge and verify that it is set to **Original=100%**.

Functional checks

Engine test page

1. Turn the product power on and wait for the message **Ready** to appear on the control-panel display.
2. Rapidly open and then close the print-cartridge door five times.

CAUTION: Do not forcibly close the door to prevent damaging the door latches.

TIP: Depress and hold down the print-cartridge door button to prevent the door latches from engaging. Open the door far enough to activate the door open sensor, and then fully close the door (rapidly, five times).

3. An engine test page prints.

Drum rotation test

The photosensitive drum, located in the print cartridge, must rotate in order for the print process to work. The photosensitive drum receives its drive from the main drive assembly.

NOTE: This test is especially important if refilled print cartridges have been used.

1. Open the print-cartridge door.
2. Remove the print cartridge.
3. Mark the drive gear on the cartridge with a felt-tipped marker. Note the position of the mark.
4. Install the print cartridge and close the print-cartridge door. The startup sequence should rotate the drum enough to move the mark.
5. Open the print-cartridge door and inspect the gear that was marked in step 3. Verify that the mark moved.

If the mark did not move, inspect the main drive assembly to make sure that it is meshing with the print cartridge gears. If the drive gears appear functional and the drum does not move, replace the print cartridge.

Half self-test functional check

The print process can be subdivided into the following stages:

- Image formation stage (charges the drum and writes a latent image to the drum with the laser)
- Development stage (forms a toner image on the drum)
- Transfer stage (transfers the image to the media)
- Cleaning stage (removes excess toner from the drum)
- Fusing stage (applies heat and pressure to the media to make the image permanent)

Perform a half self-test check

The purpose of the half self-test check is to determine which process is malfunctioning.

1. Print a configuration page.
2. Open the print cartridge access door after the paper advances halfway through the product (approximately five seconds after the motor begins rotating). The leading edge of the paper should have advanced past the print cartridge.
3. Remove the print cartridge.
4. Open the print cartridge drum shield to view the drum surface. If a dark and distinct toner image is present on the drum surface, assume that the first two functions of the electrophotographic process are functioning (image formation and development). Problem solve the failure as a transfer or fusing problem.

Perform other checks

If no image appears on the photosensitive drum, perform these checks:

1. Make sure that you removed the entire length of the sealing tape from the print cartridge before you installed the cartridge.
2. Perform a drum-rotation functional check to ensure that the drum is rotating (see Drum rotation test on page 131).
3. Perform a high-voltage power-supply check. See Heating element check on page 133.

Heating element check

Media passes between the heating element and a soft pressure roller to fuse toner to the media.

1. Unplug the product for at least ten minutes.
2. Verify that the thermistor connector is seated into both the product chassis and the ECU.
3. Remove the heating element connector from the ECU. To measure the continuity of the heating element, measure the resistance between the two pins at the end of the cable.

NOTE: Normal resistance is 25 ohms +/- 10 ohms for the 110 V product and 80 ohms +/- 20 ohms for the 220 V product.

If no resistance is measured, replace the fuser.

4. Remove the thermistor connector, and then measure the resistance between J206 pins one and two and between J206 pins three and four.

NOTE: Normal resistance between both pairs of pins is 370K ohms +/- 50K ohms at 20° C (68° F).

5. If no resistance is measured, replace the fuser.

High-voltage contacts check

The high-voltage contacts in the product must have a good connection with the contacts on the print cartridge to provide the necessary voltages for the electrophotographic processes.

Check the print-cartridge contacts

Remove the print cartridge and visually inspect the three connection points on the ends of the print cartridge: drum ground (callout 1), charging (callout 2), and developing roller (callout 3). If they are dirty or corroded, clean the connection. If they are damaged, replace the print cartridge.

NOTE: Use only isopropyl alcohol to clean the connections.

Figure 6-1 Print-cartridge high-voltage connection points (right side)

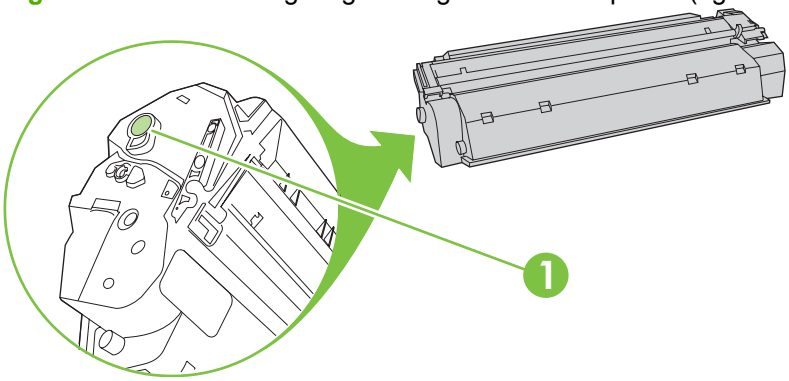
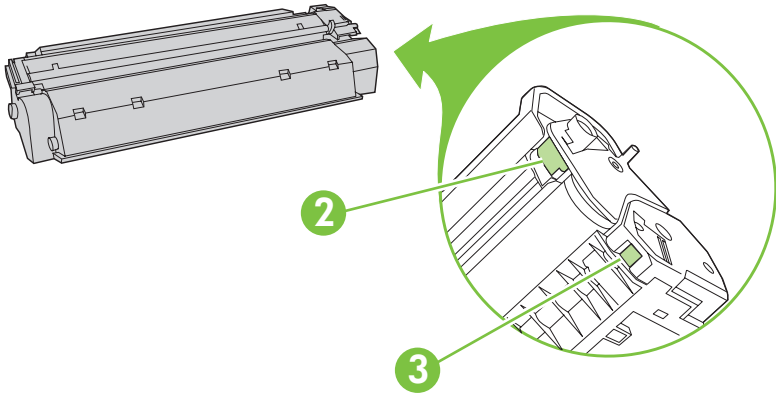


Figure 6-2 Print-cartridge high-voltage connection points (left side)



Check the high-voltage connector assembly

Visually inspect the cartridge connection points inside the product to make sure that they are not dirty or corroded. If the pins are dirty, clean them by using isopropyl alcohol only.

Service-mode functions

NVRAM initialization

An NVRAM initialization returns the device settings to the factory-set defaults.

1. Turn off the product.
2. Press and hold both the Start Copy button and the Cancel button, and then turn on the product.
3. Wait until the message **Permanent storage init.** appears, and then release the buttons.

When the NVRAM initialization process finishes, the product control panel shows the **Ready** message.

Super NVRAM initialization

The super NVRAM initialization clears all settings affected by a regular NVRAM initialization, and also clears the product language and country/region settings. Both settings must be reset after a super NVRAM initialization.

1. Turn off the product.
2. Press and hold both the right arrow button and the Cancel button, and then turn on the product.
3. Wait until the message **Permanent storage init.** appears, and then release the buttons.

When the process finishes, the product control panel shows the **Ready** message.

Secondary service menu

Use this menu to perform various tests and print out special reports.

Open the secondary service menu

1. Press the Setup button.
2. Simultaneously press and then release both the left arrow button and the OK button.
3. Press the OK button.
4. Use the arrow buttons to select the desired secondary-service option, and then press the OK button.
5. Use the arrow buttons to select the desired submenu option, and then press OK .
6. After making the necessary menu item choices, wait for the product to enter the Ready state, and then press Cancel to close the secondary service menu.

Menu item	Submenu	Description
Service Reports	**Cont. Self-Test**	The continuous self-test prints the configuration page repeatedly until you press Cancel.
	Cont. Copy	Run a continuous copy test to test the copy function.
	Extended Keymap	Print the extended keypad map to see all the characters associated with the alphanumeric keys.
	Error Report	Print the error report to see firmware errors.

Menu item	Submenu	Description
Display test		Use the **Display test** sub-menu to run a test of the control-panel display lights and LCD screen.
Button test		Use the **Button test** sub-menu to run a test of the control-panel buttons.
Show FW Version		Use the **Show FW Version** sub-menu to display the firmware version number.
High Speed USB	On (default) Off	Use the **High Speed USB** to enable or disable the high-speed function of the USB port. **TIP:** If the product has difficulty communicating with a network when using the USB port, change this setting to **Off**.
Scan Calibration	**Mono** **Red** **Green** **Blue**	Use the **Scan Calibration** sub-menu to calibrate the product scanner.

Problem-solving tools

Product information pages and reports

Information pages and reports reside within the product memory. These pages and reports help diagnose and solve problems with the product.

NOTE: If the product language was not correctly set during installation, you can set the language manually so the information pages print in one of the supported languages. Change the language by using the **System setup** menu on the control panel or by using the embedded Web server.

Configuration page

The configuration page shows the current settings and product properties.

1. On the product control panel, press Setup.
2. Use the arrow buttons to select **Reports**, and then press OK.
3. Use the arrow buttons to select **Config report**, and then press OK.

Demo page

The demo page contains examples of text and graphics.

1. On the product control panel, press Setup.
2. Use the arrow buttons to select **Reports**, and then press OK.
3. Use the arrow buttons to select **Demo page**, and then press OK.

Menu map

The menu map shows the control-panel menus and available settings.

1. On the product control panel, press Setup.
2. Use the arrow buttons to select **Reports**, and then press OK.
3. Use the arrow buttons to select **Menu structure**, and then press OK.

Service menu

Use the control-panel **Service** menu to solve product problems. In the table below, an asterisk (*) denotes the default setting.

Service menu item	Submenu option	Description
Restore defaults	None	Press OK to restore the product factory settings.
Cleaning mode	None	Press OK to start the cleaning process. See Clean the paper path on page 29 for more information.
Archive print	**Off*** **On**	The archive print feature produces output that is less susceptible to toner smearing and dusting. Use archive print to create documents that you want to preserve or archive.
Less paper curl	**Off*** **On**	Lowers the fuser temperature.

Restore the factory-set defaults

Restoring the factory-set defaults returns all of the settings to the factory defaults.

1. On the product control panel, press Setup.
2. Use the arrow buttons to select **Service**, and then press OK.
3. Use the arrow buttons to select **Restore defaults**, and then press OK.

   The product automatically restarts.

Clean the paper path

The product features a special cleaning mode to clean the paper path.

1. On the product control panel, press Setup.
2. Use the arrow buttons to select **Service**, and then press OK.
3. Use the arrow buttons to select **Cleaning Mode**, and then press OK.

   A page feeds through the product slowly. Discard the page when the process is completed.
4. Load plain letter or A4 paper when you are prompted.
5. Press OK again to confirm and begin the cleaning process.

   A page feeds through the product slowly. Discard the page when the process is completed.

Archive print

Archive print produces output that is less susceptible to toner smearing and dusting. Use archive print to create documents that you want to preserve or archive.

Turn on archive print

1. On the product control panel, press Setup.
2. Use the arrow buttons to select **Service**, and then press OK.
3. Use the arrow buttons to select **Archive print**, **On**, or **Off**, and then press OK.

Problem-solving diagrams

- Repetitive image defects
- Interface ports
- Formatter connectors
- ECU connectors
- Solenoid and motor
- Rollers
- Sensors
- Major components
- PCAs (base unit)
- Circuit diagram

Repetitive image defects

If the product output has a consistent, repetitive defect, then use Table 6-1 Repetitive image defects on page 140 to determine which part needs to be replaced based on the measured distance between the repetitions of the defect.

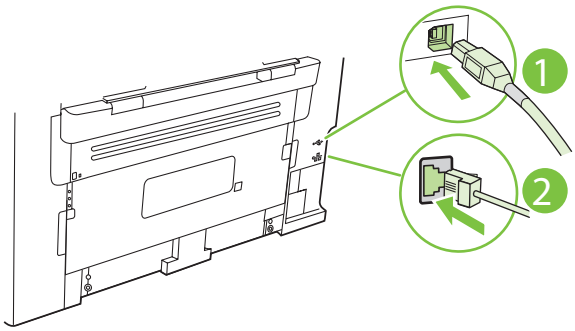
NOTE: The following table replaces the graphical repetitive defect ruler. You can make your own ruler by using these measurements.

Table 6-1 Repetitive image defects

Distance between identical defects	Dirty or damaged roller	Solution
26.7 mm (1.05 in)	Primary charging roller	Replace the print cartridge.
29.1 mm (1.14 in)	Developing cylinder	Replace the print cartridge.
39.3 mm (1.55 in)	Transfer roller	Replace the transfer roller.
56.2 mm (2.21 in)	Pressure roller	Replace the fuser.
56.5 mm (2.22 in)	Fuser film (fuser sleeve)	Replace the fuser.

Interface ports

All models have a Hi-Speed USB 2.0 port. The HP LaserJet M1120n also has a 10/100 Base-T (RJ-45) network port.



1	Hi-Speed USB 2.0 port
2	Network port (HP LaserJet M1120n only)

Formatter connectors

Figure 6-3 Formatter connectors

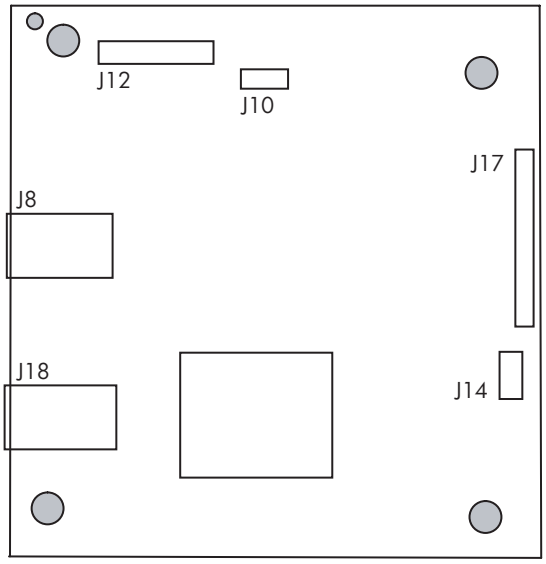


Table 6-2 Formatter connectors

Item	Description
J8	High-speed USB 2.0 port
J10	Control panel
J12	Scanner
J14	+24V (from engine)
J17	ECU PCA
J18	Network port

ECU connectors

Figure 6-4 ECU connectors

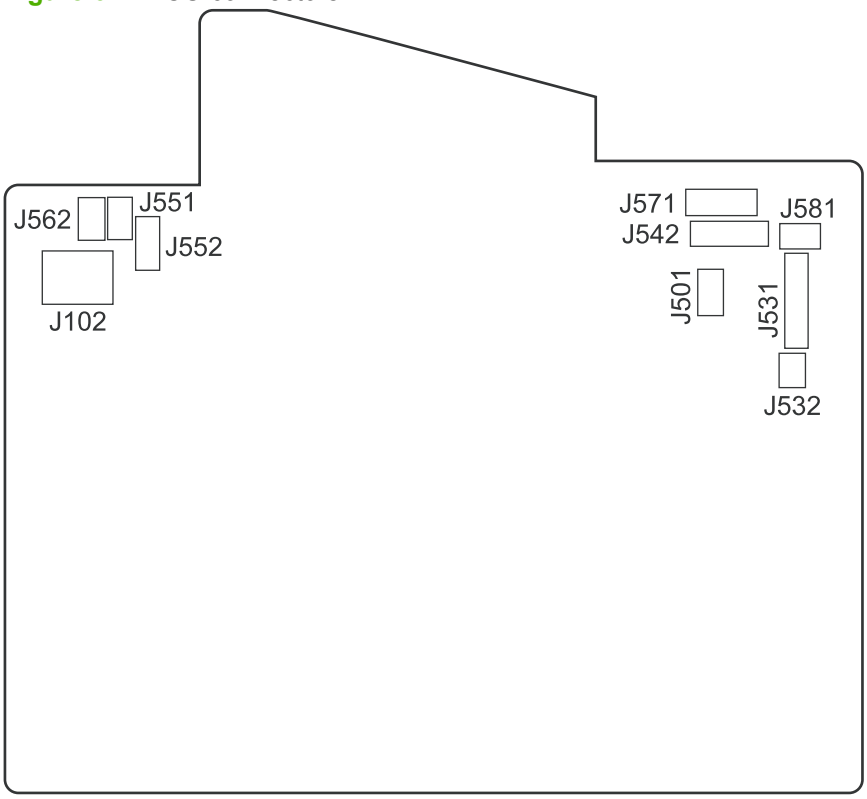


Table 6-3 ECU connectors

Item	Description
J101	Fuser (not shown)
J102	Power switch
J501	Interlock
J531	Formatter PCA (communication, +5v, +3.3v, GND)
J532	Formatter PCA (communication, +24v, GND)
J542	Laser/scanner
J551	Top-of-media sensor (PS751)
J552	Media-sensor PCA (fuser delivery sensor PS701 and media width sensor PS702)
J562	Pickup solenoid
J571	Motor-drive PCA
J581	TAGIN/TAGOUT PCA

Solenoid and motor

Figure 6-5 Solenoid and motor

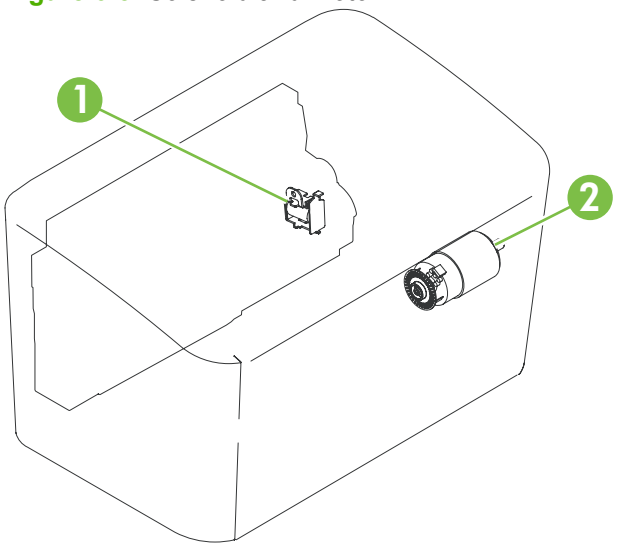


Table 6-4 Solenoid and motor

Item	Description
1	Pickup solenoid
2	Main motor

Rollers

Figure 6-6 Rollers

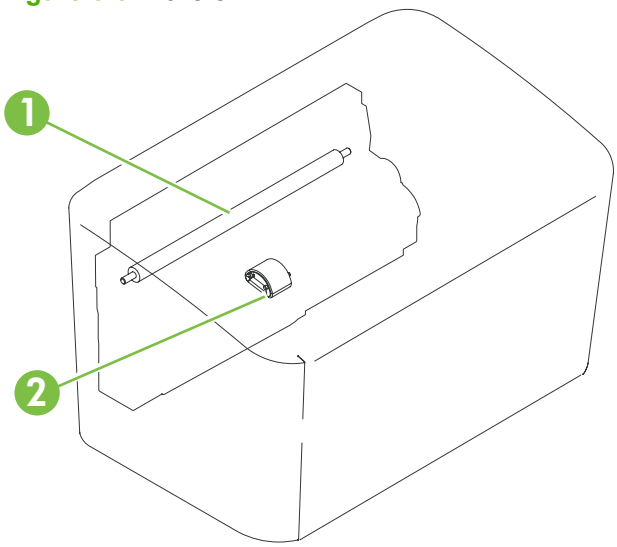


Table 6-5 Rollers

Item	Description
1	Transfer roller (fastened to the rear door)
2	Pickup roller

Sensors

Figure 6-7 Sensors

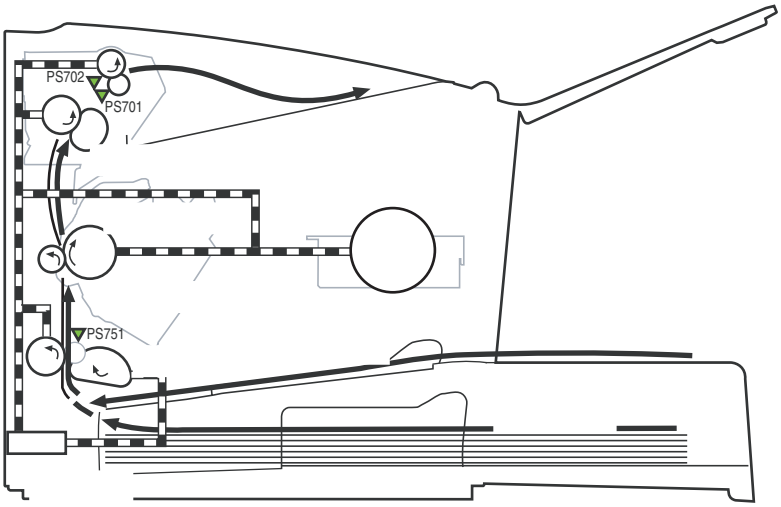


Table 6-6 Sensors

Item	Description
PS701	Fuser-delivery sensor
PS702	Media-width sensor
PS751	Top-of-page sensor

Major components

Figure 6-8 Major components

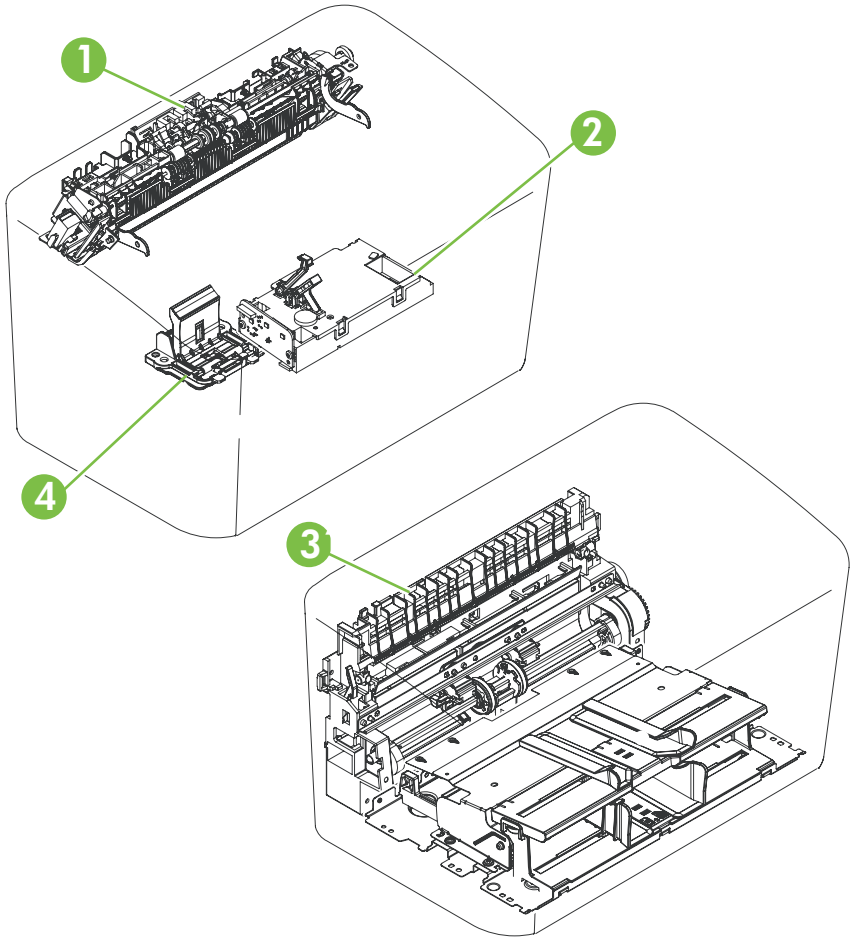


Table 6-7 Major components

Item	Description
1	Fuser assembly
2	Laser/scanner assembly
3	Paper-pickup assembly
4	Separation-pad assembly

PCAs (base unit)

Figure 6-9 PCAs (base unit)

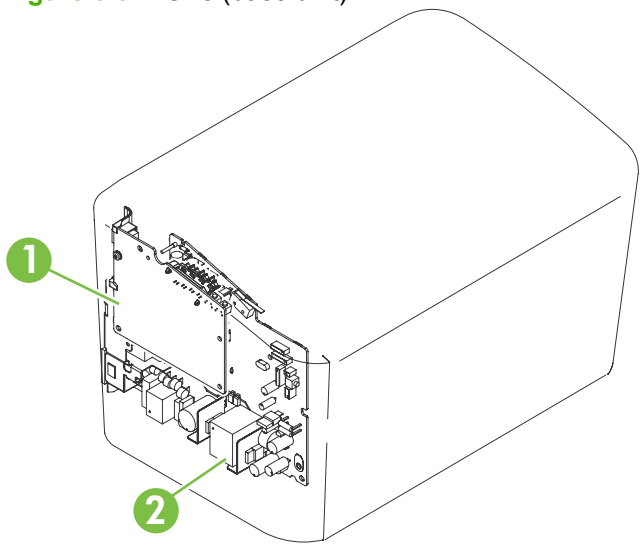
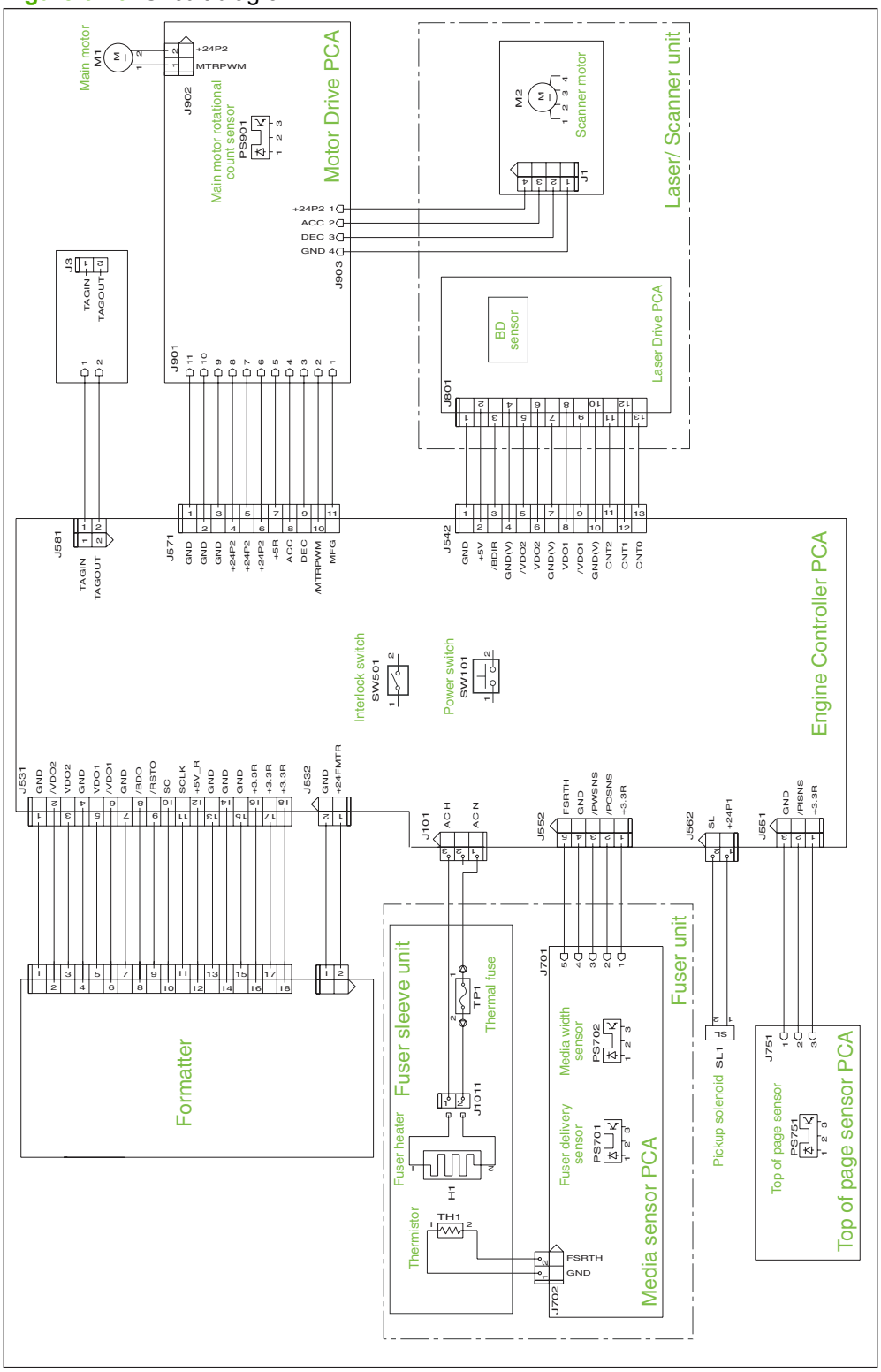


Table 6-8 PCAs (base unit)

Item	Description
1	Formatter PCA
2	Engine-controller PCA (ECU)

Circuit diagram

Figure 6-10 Circuit diagram



Firmware updates

Firmware updates and installation instructions for this product are available at www.hp.com/support/LJM1120. Click **Downloads and drivers**, click the operating system, and then select the firmware download for the product.

7 Parts

- Ordering information
- Supplies and hinge tool
- Cable and interface accessories
- Whole-unit replacement
- Control-panel overlays
- Supplementry documentation and support
- Parts lists and diagrams
- Scanner assemblies
- Assemblies
- External covers and panels
- Internal components (1 of 3)
- Internal components (2 of 3)
- Internal components (3 of 3)
- Alphabetical parts list
- Numerical parts list

Ordering information

Order replacement parts, supplies, and paper from the following Web sites:

- To order genuine HP parts and accessories, go to www.hp.com/buy/parts.com.
- To order supplies and paper, go to www.hp.com/buy/suresupply.com.

Supplies and hinge tool

Product name	Description	Part number
Replacement print cartridge	Average yield for the print cartridge is approximately 2,000 pages. Actual yield depends on use.	CB436A (new) CB436-67901 (exchange)
Scanner hinge tool	Use this tool to secure the scanner in the open position when the link assemblies are disengaged.	5185-7441

Cable and interface accessories

Product name	Description	Part number
USB cable	2-meter standard USB-compatible device connector	C6518A
	3-meter standard USB-compatible device connector	C6520A
Power cord	U.S. / Canada (1.8 M, 6 ft)	8120-8382
	Europe (1.8 M, 6 ft)	8121-0516
	Switzerland (1.8 M, 6 ft)	8121-0519
	United Kingdom (1.8 M, 6 ft)	8121-0517
	Denmark (1.8 M, 6 ft)	8121-0518
	South America (1.8 M, 6 ft)	8121-0520
	Israel (1.8 M, 6 ft)	8121-1004

Whole-unit replacement

Use the tables in this section to find the whole-unit replacement part number for a specific product bundle and localized configuration.

Table 7-1 Whole-unit replacement, product bundle CC537A

Country/region	Localized configuration	Replacement part number
Asia Pacific	AB0 - Taiwan-Traditional Chinese	CC537-67902
	AB1 - Korea-Korean localization	CC537-67903
	AB2 - China-Simplified Chinese	CC537-67904
	AB3 - Thailand-Thai	CC537-67905
	AB4 - Singapore-English	CC537-67906
	BFV - Hong Kong SAR-English/Traditional Chinese	CC537-67907
	ABG - Australia-English	CC537-67909
	A2K - Philippines-English	CC537-67910
	ACJ - India-English	CC537-67911
	AK3 - Indonesia-Indonesia localizaton	CC537-67912
	UUD - Vietnam-Vietnamese localization	CC537-67913
	ARR - Asia Pacific (Euro Cord)-English	CC537-67914
	ARS - Asia Pacific (UK Cord)-English	CC537-67915

Table 7-1 Whole-unit replacement, product bundle CC537A (continued)

Country/region	Localized configuration	Replacement part number
Europe, Middle East, and Africa	ABD - Germany-German	CC537-67916
	ABF - France-French	CC537-67917
	ABH - Netherlands-Dutch	CC537-67918
	ABZ - Italy-Italian	CC537-67919
	ABE - Spain-Spanish localization	CC537-67920
	BFY - Spain-Catalan localization	CC537-67921
	ABU - United Kingdom-English	CC537-67922
	B14 - Belgium-Dutch/French	CC537-67923
	AR8 - Switzerland-French/German	CC537-67924
	BB1 - Norway/Finland/Sweden-NO/FI/SV localization	CC537-67925
	ABY - Denmark-Danish	CC537-67926
	ACB - Russia-Cyrillic	CC537-67927
	BCM - Czech Rep/Slovakia-Czech/Slovak localization	CC537-67928
	AKC - Hungary-Hungarian localization	CC537-67929
	AKD - Poland-Polish localization	CC537-67930
	AB9 - Portugal-Portuguese localization	CC537-67931
	ACQ - South Africa-English	CC537-67932
	BCP - Greece/Israel-Greek/Hebrew localization	CC537-67933
	BFQ - Mid East 220V-AR/FR/EN localization	CC537-67934
	BFR - Estonia/Lithuania/Latvia-ET/LT/LV	CC537-67935
	BFS - Slovenia/Croatia/Serbia-SL/HR/SR	CC537-67936
	BFZ - Kazakhstan/Ukraine-Kazakh/Ukrainian locization	CC537-67937
	AB8 - Turkey-Turkish localization	CC537-67938
	BG1 - Romania/Bulgaria-Romanian/Bulgarian locization	CC537-67939
Latin America	AC8 - Argentina-Spanish	CC537-67940
	ABM - Latin Amer-(120v) Spanish localization	CC537-67941
	696 - Brazil-Portuguese	CC537-67942
	697 - Latin America-Spanish localization	CC537-67943
	AKV - South America-Spanish	CC537-67944
North America	ABA - U. S.-English	CC537-67945

Table 7-2 Whole-unit replacement, product bundle CC459A

Country/region	Localized configuration	Replacement part number
Asia Pacific	AB0 - Taiwan-Traditional Chinese	CC459-67901
	AB1 - Korea-Korean localization	CC459-67902
	AB2 - China-Simplified Chinese	CC459-67903
	AB3 - Thailand-Thai	CC459-67904
	AB4 - Singapore-English	CC459-67905
	BFV - Hong Kong SAR-English/Traditional Chinese	CC459-67906
	ABG - Australia-English	CC459-67907
	A2K - Philippines-English	CC459-67908
	ACJ - India-English	CC459-67909
	AK3 - Indonesia-Indonesia localizaton	CC459-67910
	UUD - Vietnam-Vietnamese localization	CC459-67911
	ARR - Asia Pacific (Euro Cord)-English	CC459-67912
	ARS - Asia Pacific (UK Cord)-English	CC459-67913

Table 7-2 Whole-unit replacement, product bundle CC459A (continued)

Country/region	Localized configuration	Replacement part number
Europe, Middle East, and Africa	ABD - Germany-German	CC459-67914
	ABF - France-French	CC459-67915
	ABH - Netherlands-Dutch	CC459-67916
	ABZ - Italy-Italian	CC459-67917
	ABE - Spain-Spanish localization	CC459-67918
	BFY - Spain-Catalan localization	CC459-67919
	ABU - United Kingdom-English	CC459-67920
	B14 - Belgium-Dutch/French	CC459-67921
	AR8 - Switzerland-French/German	CC459-67922
	BB1 - Norway/Finland/Sweden-NO/FI/SV localization	CC459-67923
	ABY - Denmark-Danish	CC459-67924
	ACB - Russia-Cyrillic	CC459-67925
	BCM - Czech Rep/Slovakia-Czech/Slovak localization	CC459-67926
	AKC - Hungary-Hungarian localization	CC459-67927
	AKD - Poland-Polish localization	CC459-67928
	AB9 - Portugal-Portuguese localization	CC459-67929
	ACQ - South Africa-English	CC459-67930
	BCP - Greece/Israel-Greek/Hebrew localization	CC459-67931
	BFQ - Mid East 220V-AR/FR/EN localization	CC459-67932
	BFR - Estonia/Lithuania/Latvia-ET/LT/LV	CC459-67933
	BFS - Slovenia/Croatia/Serbia-SL/HR/SR	CC459-67934
	BFZ - Kazakhstan/Ukraine-Kazakh/Ukrainian localization	CC459-67935
	AB8 - Turkey-Turkish localization	CC459-67936
	BG1 - Romania/Bulgaria-Romanian/Bulgarian localization	CC459-67937
Latin America	AC8 - Argentina-Spanish	CC459-67938
	ABM - Latin Amer-(120v) Spanish localization	CC459-67939
	696 - Brazil-Portuguese	CC459-67940
	697 - Latin America-Spanish localization	CC459-67941
	AKV - South America-Spanish	CC459-67942
North America	ABA - U. S.-English	CC459-67943

Control-panel overlays

Table 7-3 Control-panel overlays, HP LaserJet M1120

Item	Language	Part number
Control-panel overlay	English (EN)	CB537-00003
Control-panel overlay	Spanish (ES)	CB537-00004
Control-panel overlay	Portuguese (PT)	CB537-00005
Control-panel overlay	German (DE)	CB537-00006
Control-panel overlay	French (FR)	CB537-00007
Control-panel overlay	Dutch (NL)	CB537-00008
Control-panel overlay	Italian (IT)	CB537-00009
Control-panel overlay	Swedish (SV)	CB537-00010
Control-panel overlay	Norwegian (NO)	CB537-00011
Control-panel overlay	Finnish (FI)	CB537-00012
Control-panel overlay	Danish (DA)	CB537-00013
Control-panel overlay	Russian (RU)	CB537-00014
Control-panel overlay	Czech (CS)	CB537-00015
Control-panel overlay	Hungarian (HU)	CB537-00016
Control-panel overlay	Polish (PL)	CB537-00017
Control-panel overlay	Slovak (SK)	CB537-00018
Control-panel overlay	Turkish (TR)	CB537-00019
Control-panel overlay	Greek (EL)	CB537-00020
Control-panel overlay	Hebrew (HE)	CB537-00021
Control-panel overlay	Arabic (AR)	CB537-00022
Control-panel overlay	Traditional Chinese (ZHTW)	CB537-00023
Control-panel overlay	Korean (KO)	CB537-00024
Control-panel overlay	Simplified Chinese (ZHCN)	CB537-00025
Control-panel overlay	Thai (TH)	CB537-00026
Control-panel overlay	Vietnamese (VI)	CB537-00027
Control-panel overlay	Catalan (CA)	CB537-00029
Control-panel overlay	Romanian (RO)	CB537-00030
Control-panel overlay	Croation (HR)	CB537-00031
Control-panel overlay	Slovenian (SL)	CB537-00032
Control-panel overlay	Indonesian (ID)	CB537-00033
Control-panel overlay	Kazakh (KK)	CB537-00034
Control-panel overlay	Bulgarian (BG)	CB537-00035

Table 7-3 Control-panel overlays, HP LaserJet M1120 (continued)

Item	Language	Part number
Control-panel overlay	Ukranian (UK)	CB537-00036
Control-panel overlay	Serbian (SR)	CB537-00037
Control-panel overlay	Lithuanian (LT)	CB537-00038
Control-panel overlay	Estonian (ET)	CB537-00039
Control-panel overlay	Latvian (LV)	CB537-00040

Table 7-4 Control-panel overlays, HP LaserJet M1120n

Item	Language	Part number
Control-panel overlay	English (EN)	CC459-00003
Control-panel overlay	Spanish (ES)	CC459-00004
Control-panel overlay	Portuguese (PT)	CC459-00005
Control-panel overlay	German (DE)	CC459-00006
Control-panel overlay	French (FR)	CC459-00007
Control-panel overlay	Dutch (NL)	CC459-00008
Control-panel overlay	Italian (IT)	CC459-00009
Control-panel overlay	Swedish (SV)	CC459-00010
Control-panel overlay	Norwegian (NO)	CC459-00011
Control-panel overlay	Finnish (FI)	CC459-00012
Control-panel overlay	Danish (DA)	CC459-00013
Control-panel overlay	Russian (RU)	CC459-00014
Control-panel overlay	Czech (CS)	CC459-00015
Control-panel overlay	Hungarian (HU)	CC459-00016
Control-panel overlay	Polish (PL)	CC459-00017
Control-panel overlay	Slovak (SK)	CC459-00018
Control-panel overlay	Turkish (TR)	CC459-00019
Control-panel overlay	Greek (EL)	CC459-00020
Control-panel overlay	Hebrew (HE)	CC459-00021
Control-panel overlay	Arabic (AR)	CC459-00022
Control-panel overlay	Traditional Chinese (ZHTW)	CC459-00023
Control-panel overlay	Korean (KO)	CC459-00024
Control-panel overlay	Simplified Chinese (ZHCN)	CC459-00025
Control-panel overlay	Thai (TH)	CC459-00026
Control-panel overlay	Vietnamese (VI)	CC459-00027
Control-panel overlay	Catalan (CA)	CC459-00028

Table 7-4 Control-panel overlays, HP LaserJet M1120n (continued)

Item	Language	Part number
Control-panel overlay	Romanian (RO)	CC459-00029
Control-panel overlay	Croation (HR)	CC459-00030
Control-panel overlay	Slovenian (SL)	CC459-00031
Control-panel overlay	Indonesian (ID)	CC459-00032
Control-panel overlay	Kazakh (KK)	CC459-00033
Control-panel overlay	Bulgarian (BG)	CC459-00034
Control-panel overlay	Ukranian (UK)	CC459-00035
Control-panel overlay	Serbian (SR)	CC459-00036
Control-panel overlay	Lithuanian (LT)	CC459-00037
Control-panel overlay	Estonian (ET)	CC459-00038
Control-panel overlay	Latvian (LV)	CC459-00030

Supplementry documentation and support

Table 7-5 Documentation (print on demand)

Description	Languages	Part number
Service manual (this manual)	English only	CB537-90945
Getting Started guides	English, Spanish, Portuguese, French	CB537-90901
	English, Spanish, Portuguese, Catalan, Dutch, French, German, Italian	CB537-90902
	English, Danish, Finnish, French, Norwegian, Swedish, Arabic	CB537-90903
	English, Bulgarian, Czech, Hungarian, Polish, Romanian, Russian, Slovak	CB537-90904
	English, Kazakh, Turkish, Ukrainian, Estonian, Latvian, Lithuanian	CB537-90905
	English, Croation, Greek, Serbian, Slovenian, Hebrew	CB537-90906
	English, Korean, Indonesian, Chinese simplified, Chinese traditional, Thai, Vietnamese	CB537-90907
User guides	English	CB537-90908
	Arabic	CB537-90943
	Bulgarian	CB537-90914
	Chinese simplified	CB537-90915
	Chinese traditional	CB537-90939
	Croatian	CB537-90916
	Czech	CB537-90917

Table 7-5 Documentation (print on demand) (continued)

Description	Languages	Part number
User guides, continued	Danish	CB537-90918
	Dutch	CB537-90919
	Estonian	CB537-90920
	Finnish	CB537-90921
	French	CB537-90909
	German	CB537-90910
	Greek	CB537-90922
	Hebrew	CB537-90944
	Hungarian	CB537-90923
	Indonesian	CB537-90924
	Italian	CB537-90911
	Kazakh	CB537-90925
	Korean	CB537-90926
	Latvian	CB537-90927
	Lithuanian	CB537-90928
	Norwegian	CB537-90929
	Polish	CB537-90930
	Portuguese	CB537-90931
	Romanian	CB537-90932
	Russian	CB537-90933
	Serbian	CB537-90934
	Slovak	CB537-90935
	Slovenian	CB537-90936
	Spanish, Catalan	CB537-90913
	Spanish, mid-Atlantic	CB537-90912
	Swedish	CB537-90937
	Thai	CB537-90938
	Turkish	CB537-90940
	Ukrainian	CB537-90941
	Vietnamese	CB537-90942

Parts lists and diagrams

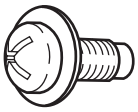
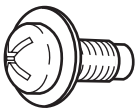
How to use the parts lists and diagrams

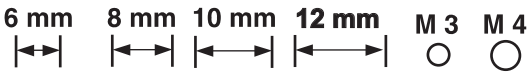
The figures in this chapter show the major subassemblies in the product and their component parts. A parts list table follows each exploded-view assembly diagram. Each table lists the item number, the associated part number, and the description of each part. If a part is not listed in the table, then it is not a field replaceable unit (FRU).

△ **CAUTION:** Be sure to order the correct part. When looking for part numbers for electrical components, pay careful attention to the voltage that is listed in the description column to ensure that the part number selected is for the correct product model.

NOTE: In this manual, the abbreviation “PCA” stands for “printed circuit board assembly.” Components described as a PCA might consist of a single circuit board or a circuit board plus other parts, such as cables and sensors.

Types of screws

Illustration	Description	Size	Part number	Use
	Screw, RS	M3X6 M3X8 M3X10	XB2-8300-609CN XA9-1504-000CN XA9-1501-000CN	Used to secure plastic to metal
	Screw, D	M3X6	XA9-1670-000CN	Used to secure plastic to metal
	Screw w/washer	M3X6 M3X8	XB2-7300-605CN XA9-1420-000CN	Used to secure metal components to metal components
	Screw tapping	M4X10 M3X9	XB4-5401-009CN 0515-4671	Used to secure anything to plastic Control panel to scanner



Scanner assemblies

Figure 7-1 Scanner assemblies

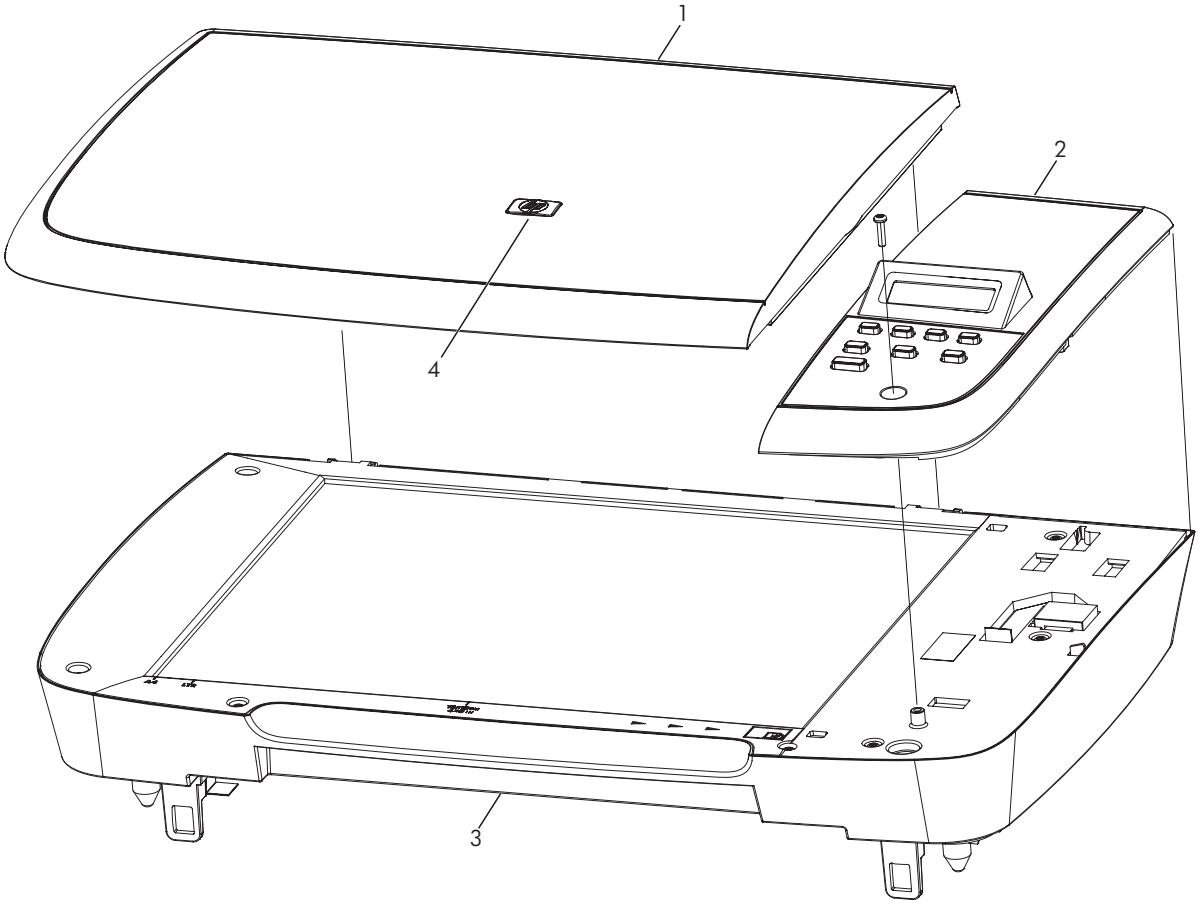


Table 7-6 Scanner assemblies

Ref	Description	Part number	Qty
1	Flatbed lid	CB537-60102	1
2	Control-panel assembly, LJm1120 (Western)	CB537-60109	1
2	Control-panel assembly, LJm1120 (Asian)	CB537-60110	1
3	SSA PKG FGI ASSY LJm1120 (scanner flatbed assembly)	CB537-67901	1
4	LJm1005 HP Jewel	7121-8285	1

Assemblies

Figure 7-2 Assemblies

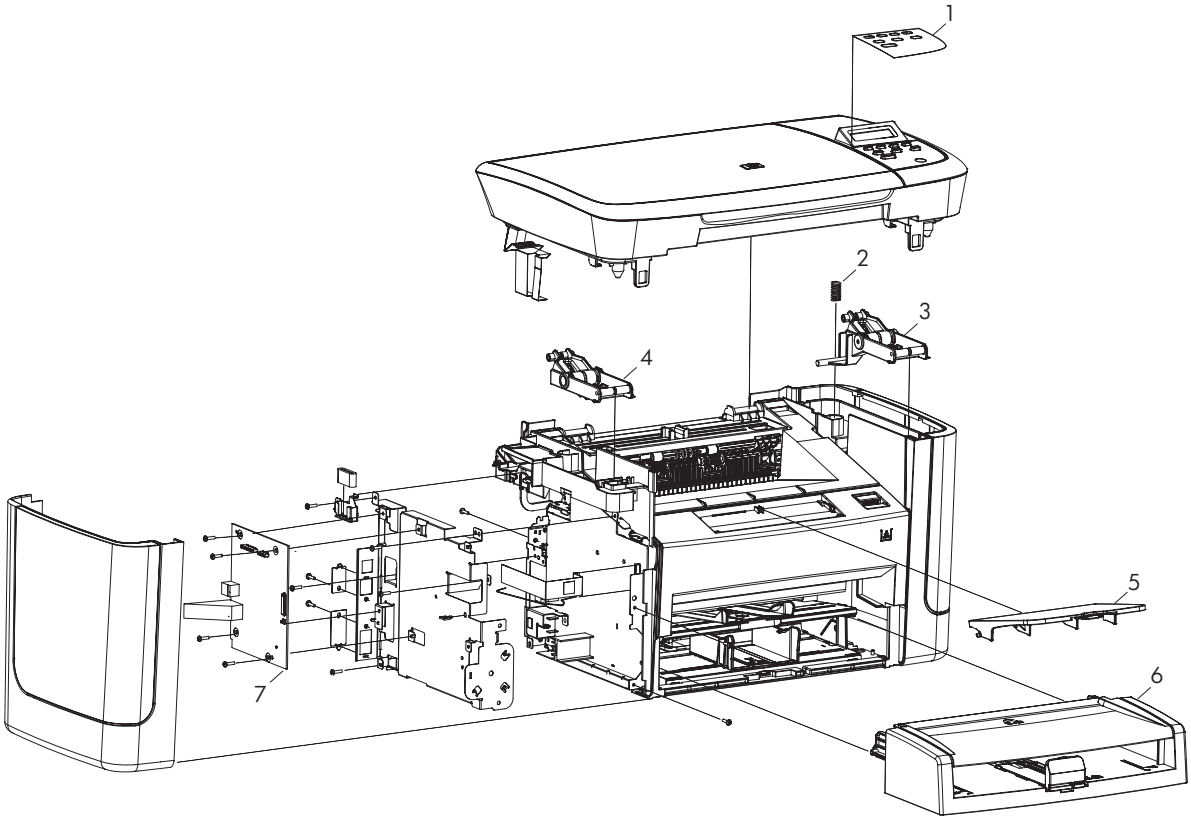


Table 7-7 Assemblies

Ref	Description	Part number	Qty
1	Control-panel overlay	See Control-panel overlays on page 157.	1
2	Scanner spring, tension	RU6-2637-000CN	1
3	Scanner-link assembly, right	RM1-3954-000CN	1
4	Scanner-link assembly, left	RM1-3953-000CN	1
5	Paper-delivery tray assembly	RM1-4725-000CN	1
6	Paper-pickup tray assembly	RM1-4722-000CN	1
7	Formatter, standard (HP LaserJet M1120)	CC390-60001	1
7	Formatter, Asian (HP LaserJet M1120)	CC539-60001	1
7	Formatter, standard (HP LaserJet M1120n)	CC427-60001	1
7	Formatter, Asian (HP LaserJet M1120n)	CC540-60001	1

External covers and panels

Figure 7-3 External covers and panels

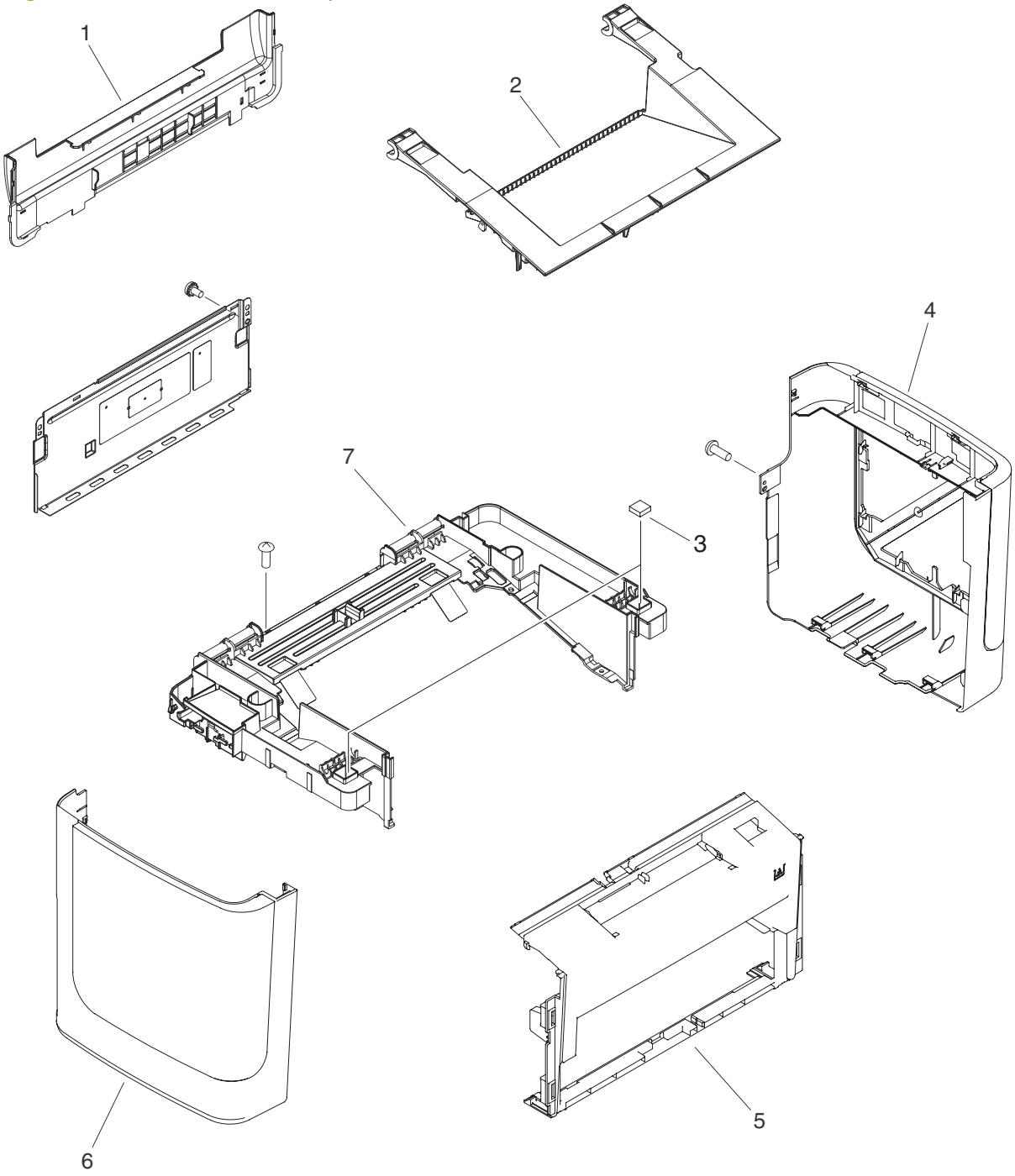


Table 7-8 External covers and panels

Ref	Description	Part number	Qty
1	Cover, rear	RC2-2971-000CN	1
2	Cover, cartridge	RC2-2960-000CN	1
3	Cushion, scanner	RC1-2476-000CN	2
4	Cover, right	RL1-1736-000CN	1
5	Cover, front	RL1-1734-000CN	1
6	Cover, left	RL1-1735-000CN	1
7	Cover, top	RL1-1732-000CN	1

Internal components (1 of 3)

Figure 7-4 Internal components (1 of 3)

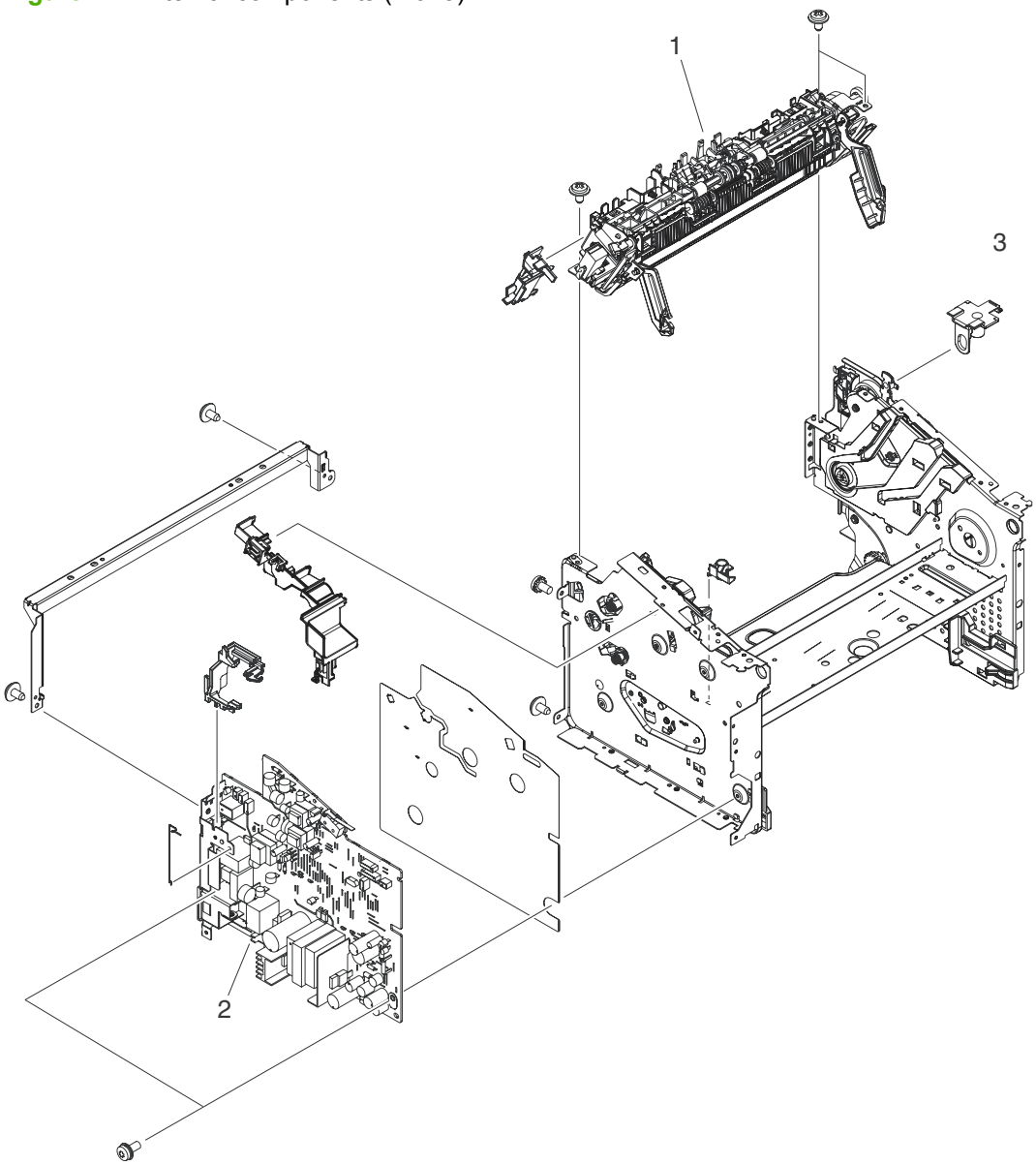


Table 7-9 Internal components (1 of 3)

Ref	Description	Part number	Qty
1	Fuser assembly, 110v-220v	RM1-4721-000CN	1
1	Fuser assembly, 220v-240v	RM1-4726-000CN	1
2	Engine controller PCA (ECU), 110v-220v	RM1-4932-000CN	1
2	Engine controller PCA (ECU), 220v-240v	RM1-4936-000CN	1
3	Link, coupling	RC2-2965-000CN	1

Internal components (2 of 3)

Figure 7-5 Internal components (2 of 3)

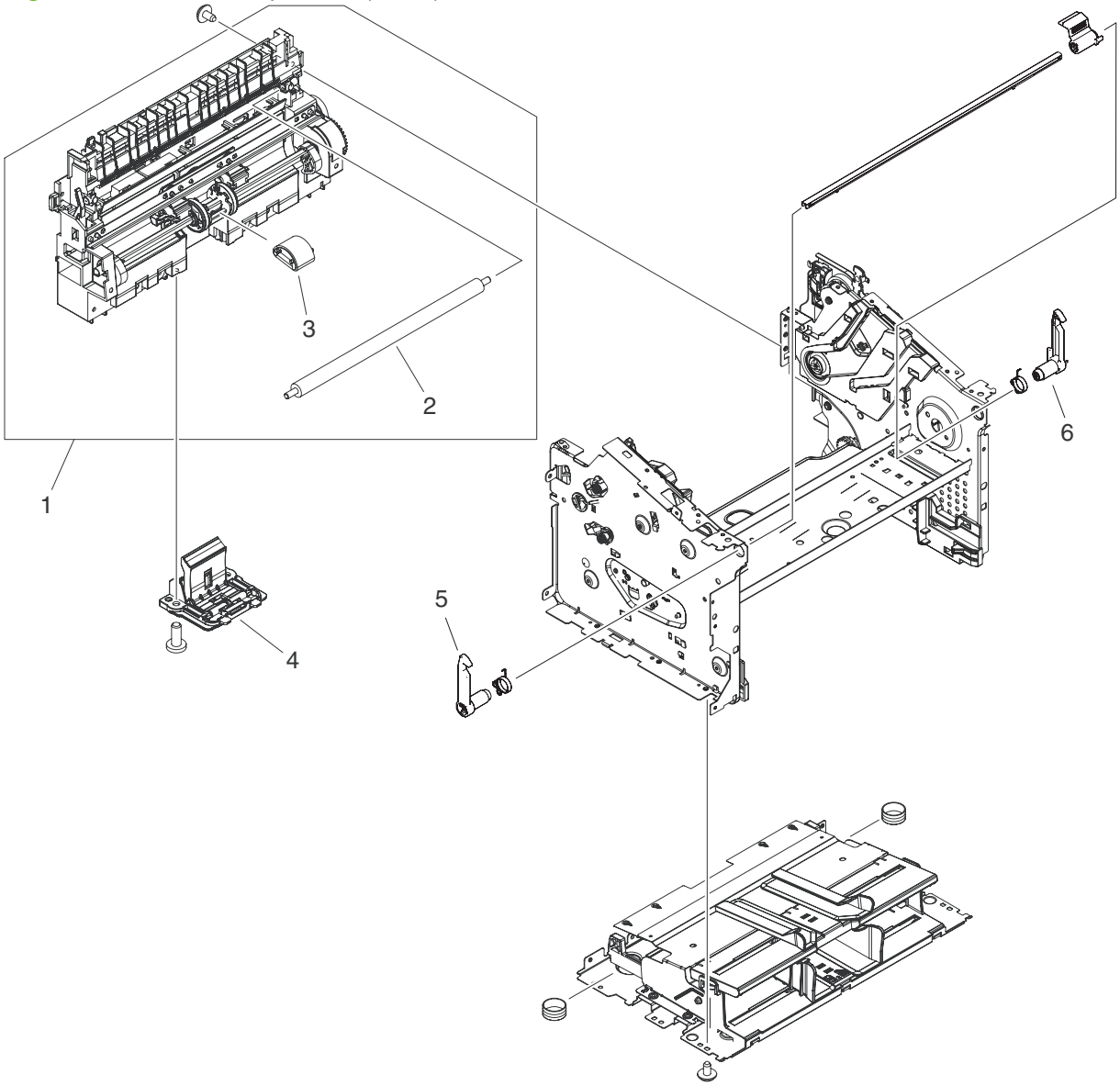


Table 7-10 Internal components (2 of 3)

Ref	Description	Part number	Qty
1	Paper-pickup assembly	RM1-4727-000CN	1
2	Roller, transfer	RM1-4234-000CN	1
3	Roller, pickup	RL1-1497-000CN	1
4	Separation-pad assembly	RM1-4207-000CN	1
5	Latch, left	RC1-2498-000CN	1
6	Latch, right	RC1-2499-000CN	1

Internal components (3 of 3)

Figure 7-6 Internal components (3 of 3)

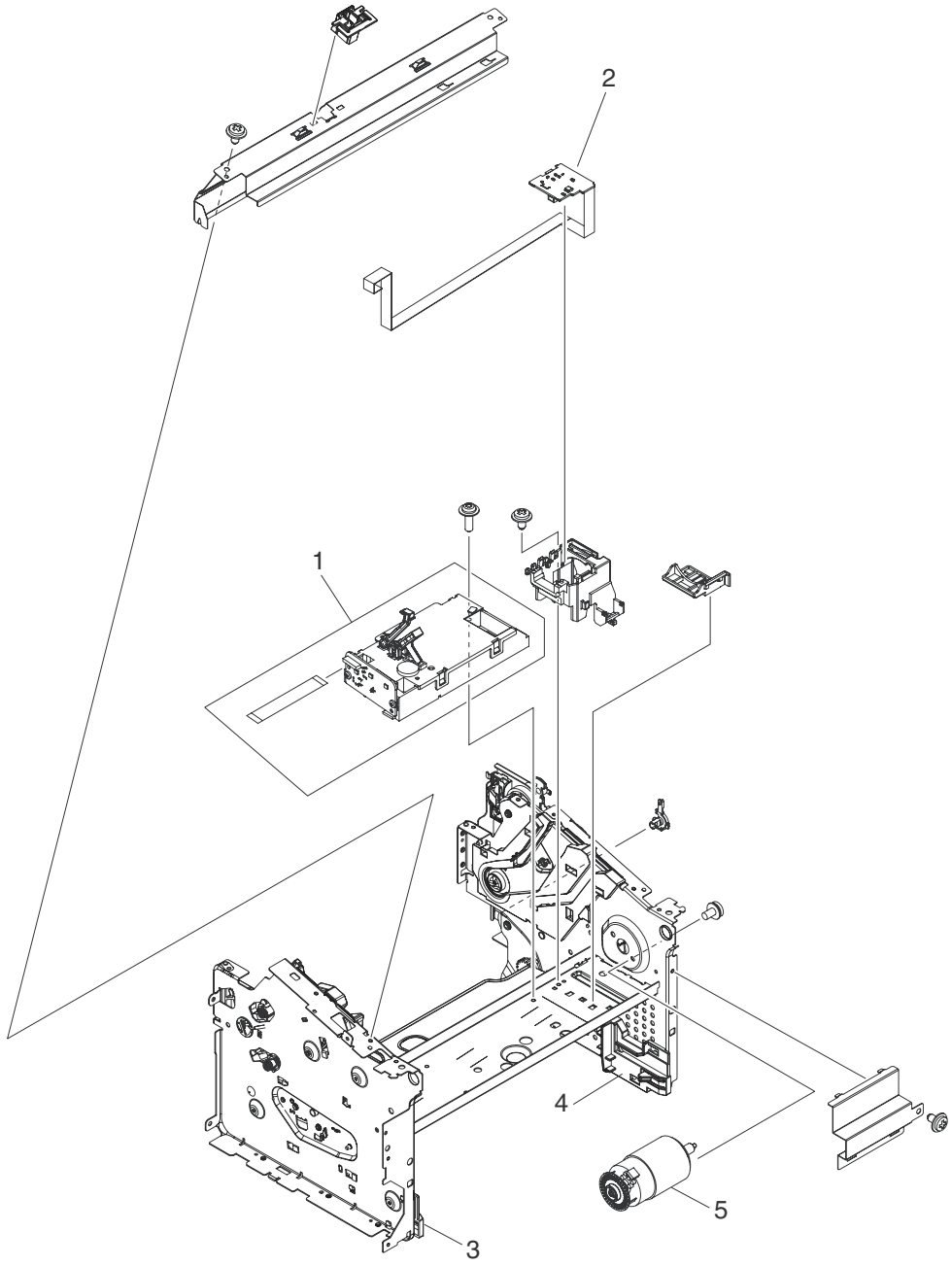


Table 7-11 Internal components (3 of 3)

Ref	Description	Part number	Qty
1	Laser/scanner assembly	RM1-4724-005CN	1
2	Motor-controller PCA	RM1-4935-000CN	1
3	Tray guide, left	RC2-2979-000CN	1
4	Tray guide, right	RC2-2980-000CN	1
5	Motor, 24V DC	RM1-4196-000CN	1

Alphabetical parts list

Table 7-12 Alphabetical parts list

Description	Part number	Table and page
Control-panel assembly, LJm1120 (Asian)	CB537-60110	Scanner assemblies on page 165
Control-panel assembly, LJm1120 (Western)	CB537-60109	Scanner assemblies on page 165
Control-panel overlay	See Control-panel overlays on page 157.	Assemblies on page 167
Cover, cartridge	RC2-2960-000CN	External covers and panels on page 169
Cover, front	RL1-1734-000CN	External covers and panels on page 169
Cover, left	RL1-1735-000CN	External covers and panels on page 169
Cover, rear	RC2-2971-000CN	External covers and panels on page 169
Cover, right	RL1-1736-000CN	External covers and panels on page 169
Cover, top	RL1-1732-000CN	External covers and panels on page 169
Cushion, scanner	RC1-2476-000CN	External covers and panels on page 169
Engine controller PCA (ECU), 110v-220v	RM1-4932-000CN	Internal components (1 of 3) on page 171
Engine controller PCA (ECU), 220v-240v	RM1-4936-000CN	Internal components (1 of 3) on page 171
Flatbed lid	CB537-60102	Scanner assemblies on page 165
Formatter, Asian (HP LaserJet M1120)	CC539-60001	Assemblies on page 167
Formatter, Asian (HP LaserJet M1120n)	CC540-60001	Assemblies on page 167
Formatter, standard (HP LaserJet M1120)	CC390-60001	Assemblies on page 167
Formatter, standard (HP LaserJet M1120n)	CC427-60001	Assemblies on page 167
Fuser assembly, 110v-220v	RM1-4721-000CN	Internal components (1 of 3) on page 171
Fuser assembly, 220v-240v	RM1-4726-000CN	Internal components (1 of 3) on page 171
Laser/scanner assembly	RM1-4724-005CN	Internal components (3 of 3) on page 175
Latch, left	RC1-2498-000CN	Internal components (2 of 3) on page 173
Latch, right	RC1-2499-000CN	Internal components (2 of 3) on page 173

Table 7-12 Alphabetical parts list (continued)

Description	Part number	Table and page
Link, coupling	RC2-2965-000CN	Internal components (1 of 3) on page 171
LJm1005 HP Jewel	7121-8285	Scanner assemblies on page 165
Motor, 24V DC	RM1-4196-000CN	Internal components (3 of 3) on page 175
Motor-controller PCA	RM1-4935-000CN	Internal components (3 of 3) on page 175
Paper-delivery tray assembly	RM1-4725-000CN	Assemblies on page 167
Paper-pickup assembly	RM1-4727-000CN	Internal components (2 of 3) on page 173
Paper-pickup tray assembly	RM1-4722-000CN	Assemblies on page 167
Roller, pickup	RL1-1497-000CN	Internal components (2 of 3) on page 173
Roller, transfer	RM1-4234-000CN	Internal components (2 of 3) on page 173
Scanner spring, tension	RU6-2637-000CN	Assemblies on page 167
Scanner-link assembly, left	RM1-3953-000CN	Assemblies on page 167
Scanner-link assembly, right	RM1-3954-000CN	Assemblies on page 167
Separation-pad assembly	RM1-4207-000CN	Internal components (2 of 3) on page 173
SSA PKG FGI ASSY LJm1120 (scanner flatbed assembly)	CB537-67901	Scanner assemblies on page 165
Tray guide, left	RC2-2979-000CN	Internal components (3 of 3) on page 175
Tray guide, right	RC2-2980-000CN	Internal components (3 of 3) on page 175

Numerical parts list

Table 7-13 Numerical parts list

Part number	Description	Table and page
7121-8285	LJm1005 HP Jewel	Scanner assemblies on page 165
CB537-60102	Flatbed lid	Scanner assemblies on page 165
CB537-60109	Control-panel assembly, LJm1120 (Western)	Scanner assemblies on page 165
CB537-60110	Control-panel assembly, LJm1120 (Asian)	Scanner assemblies on page 165
CB537-67901	SSA PKG FGI ASSY LJm1120 (scanner flatbed assembly)	Scanner assemblies on page 165
CC390-60001	Formatter, standard (HP LaserJet M1120)	Assemblies on page 167
CC427-60001	Formatter, standard (HP LaserJet M1120n)	Assemblies on page 167
CC539-60001	Formatter, Asian (HP LaserJet M1120)	Assemblies on page 167
CC540-60001	Formatter, Asian (HP LaserJet M1120n)	Assemblies on page 167
RC1-2476-000CN	Cushion, scanner	External covers and panels on page 169
RC1-2498-000CN	Latch, left	Internal components (2 of 3) on page 173
RC1-2499-000CN	Latch, right	Internal components (2 of 3) on page 173
RC2-2960-000CN	Cover, cartridge	External covers and panels on page 169
RC2-2965-000CN	Link, coupling	Internal components (1 of 3) on page 171
RC2-2971-000CN	Cover, rear	External covers and panels on page 169
RC2-2979-000CN	Tray guide, left	Internal components (3 of 3) on page 175
RC2-2980-000CN	Tray guide, right	Internal components (3 of 3) on page 175
RL1-1497-000CN	Roller, pickup	Internal components (2 of 3) on page 173
RL1-1732-000CN	Cover, top	External covers and panels on page 169
RL1-1734-000CN	Cover, front	External covers and panels on page 169
RL1-1735-000CN	Cover, left	External covers and panels on page 169
RL1-1736-000CN	Cover, right	External covers and panels on page 169

Table 7-13 Numerical parts list (continued)

Part number	Description	Table and page
RM1-3953-000CN	Scanner-link assembly, left	Assemblies on page 167
RM1-3954-000CN	Scanner-link assembly, right	Assemblies on page 167
RM1-4196-000CN	Motor, 24V DC	Internal components (3 of 3) on page 175
RM1-4207-000CN	Separation-pad assembly	Internal components (2 of 3) on page 173
RM1-4234-000CN	Roller, transfer	Internal components (2 of 3) on page 173
RM1-4721-000CN	Fuser assembly, 110v-220v	Internal components (1 of 3) on page 171
RM1-4722-000CN	Paper-pickup tray assembly	Assemblies on page 167
RM1-4724-005CN	Laser/scanner assembly	Internal components (3 of 3) on page 175
RM1-4725-000CN	Paper-delivery tray assembly	Assemblies on page 167
RM1-4726-000CN	Fuser assembly, 220v-240v	Internal components (1 of 3) on page 171
RM1-4727-000CN	Paper-pickup assembly	Internal components (2 of 3) on page 173
RM1-4932-000CN	Engine controller PCA (ECU), 110v-220v	Internal components (1 of 3) on page 171
RM1-4935-000CN	Motor-controller PCA	Internal components (3 of 3) on page 175
RM1-4936-000CN	Engine controller PCA (ECU), 220v-240v	Internal components (1 of 3) on page 171
RU6-2637-000CN	Scanner spring, tension	Assemblies on page 167
See Control-panel overlays on page 157.	Control-panel overlay	Assemblies on page 167

A Service and support

Hewlett-Packard limited warranty statement

HP PRODUCT	DURATION OF LIMITED WARRANTY
HP LaserJet M1120 and M1120n	One-year limited warranty

HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.

HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software which does not execute its programming instructions due to such defects.

HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. Some countries/regions, states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country/region to country/region, state to state, or province to province. HP's limited warranty is valid in any country/region or locality where HP has a support presence for this product and where HP has marketed this product. The level of warranty service you receive may vary according to local standards. HP will not alter form, fit or function of the product to make it operate in a country/region for which it was never intended to function for legal or regulatory reasons.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL

(INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries/regions, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Customer self repair warranty service

HP products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period, HP identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts: 1) Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service. 2) Parts for which customer self repair is optional. These parts are also designed for Customer Self Repair. If, however, you require that HP replace them for you, this may be done at no additional charge under the type of warranty service designated for your product.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same-day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the phone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

Print cartridge limited warranty statement

This HP product is warranted to be free from defects in materials and workmanship.

This warranty does not apply to products that (a) have been refilled, refurbished, remanufactured or tampered with in any way, (b) experience problems resulting from misuse, improper storage, or operation outside of the published environmental specifications for the device product or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem and print samples) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTY IS EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

TO THE EXTENT ALLOWED BY LOCAL LAW, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Customer support

Get telephone support, free during your warranty period, for your country/region Have the product name, serial number, date of purchase, and problem description ready.	Country/region phone numbers are on the flyer that was in the box with your product or at www.hp.com/support/.
Get 24-hour Internet support	www.hp.com/support/LJM1120
Get support for products used with a Macintosh computer	www.hp.com/go/macosx
Download software utilities, drivers, and electronic information	www.hp.com/go/LJM1120_software
Order supplies and paper	www.hp.com/go/suresupply
Order genuine HP parts or accessories	www.hp.com/buy/parts
Order additional HP service or maintenance agreements	www.hp.com/go/carepack

HP maintenance agreements

HP has several types of maintenance agreements that meet a wide range of support needs. Maintenance agreements are not part of the standard warranty. Support services may vary by area. Check with your local HP dealer to determine the services available to you.

Repacking the device

If HP Customer Care determines that your device needs to be returned to HP for repair, follow the steps below to repack the device before shipping it.

△ **CAUTION:** Shipping damage as a result of inadequate packing is the customer's responsibility.

1. Remove and retain the print cartridge.

   △ **CAUTION:** It is *extremely important* to remove the print cartridge before shipping the device. A print cartridge that remains in the device during shipping will leak and entirely cover the device engine and other parts with toner.

   To prevent damage to the print cartridge, avoid touching the roller on it, and store the print cartridge in its original packing material or so that it is not exposed to light.

2. Remove and retain the power cable, interface cable, and optional accessories.
3. If possible, include print samples and 50 to 100 sheets of paper or other print media that did not print correctly.
4. In the U.S., call HP Customer Care to request new packing material. In other areas, use the original packing material, if possible. Hewlett-Packard recommends insuring the equipment for shipment.

Extended warranty

HP Support provides coverage for the HP hardware product and all HP-supplied internal components. The hardware maintenance covers a 1- to 3-year period from date of the HP product purchase. The customer must purchase HP Support within the stated factory warranty. For more information, contact the HP Customer Care Service and Support group.

B Specifications

This section contains the following information about the product:

- Physical specifications
- Electrical specifications
- Power consumption
- Environmental specifications
- Acoustic emissions

Physical specifications

Table B-1 Physical specifications

Product	Height	Depth	Width	Weight
HP LaserJet M1120	308 mm (12.1 in)	363 mm (14.3 in)	437 mm (17.2 in)	8.2 kg (18.7 lb)
HP LaserJet M1120n	308 mm (12.1 in)	363 mm (14.3 in)	437 mm (17.2 in)	8.2 kg (18.7 lb)

Electrical specifications

△ **CAUTION:** Power requirements are based on the country/region where the product is sold. Do not convert operating voltages. This will damage the product and void the product warranty.

Table B-2 Electrical specifications

Item	110-volt models	230-volt models
Power requirements	110 to 127 V (+/- 10%)	220 to 240 V (+/- 10%)
	50 / 60 Hz (+/- 2 Hz)	50 / 60 Hz (+/- 2 Hz)
Rated current	4.9 A	2.9 A

Power consumption

Table B-3 Power consumption (average, in watts)[1]

Product model	Printing[2]	Copying[2]	Ready/Sleep[3]	Off
HP LaserJet M1120	420 W	420 W	5 W	<0.1 W
HP LaserJet M1120n	420 W	420 W	8 W	<0.1 W

1 Values are based on preliminary data. See www.hp.com/support/LJM1120 for current information.

2 Power reported is highest values measured using all standard voltages.

3 Instant on fuser technology.

4 Recovery time from Ready/Sleep to start of printing < 6 seconds.

5 Maximum heat dissipation for all models in Ready mode = 30 BTU/hour

Environmental specifications

Table B-4 Environmental specifications[1]

	Recommended	Operating	Storage
Temperature	15° to 32.5° C (59° to 90.5° F)	15° to 32.5° C (59° to 90.5° F)	–20° to 40° C (–4° to 104° F)
Relative humidity	10% to 80%	10% to 80%	95% or less

[1] Values are subject to change.

Acoustic emissions

Table B-5 Acoustic emissions

Sound Power Level	**Declared per ISO 9296**[1]
Printing (19 ppm)	L_{WAd} = 6.6 Bels(A) [66 dB(A)]
Ready	Inaudible
Sound Pressure Level - Bystander Position	**Declared per ISO 9296**[1]
Printing (19 ppm)	L_{pAm} = 53 dB(A)
Ready	Inaudible

[1] Values are based on preliminary data. See www.hp.com/support/LJM1120 for current information.

[2] Configuration tested: HP LaserJet M1120 printing simplex using A4 paper at 19 ppm.

C Regulatory information

This section contains the following regulatory information:

- FCC compliance
- Environmental product stewardship program
- Declaration of conformity
- Safety statements

FCC compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If it is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase separation between equipment and receiver.
- Connect equipment to an outlet on a circuit different from that to which the receiver is located.
- Consult your dealer or an experienced radio/TV technician.

NOTE: Any changes or modifications to the printer that are not expressly approved by Hewlett-Packard could void the user's authority to operate this equipment.

Use of a shielded interface cable is required to comply with the Class B limits of Part 15 of FCC rules.

Environmental product stewardship program

Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally sound manner. This product has been designed with several attributes to minimize impacts on our environment.

Ozone production

This product generates no appreciable ozone gas (O_3).

Power consumption

Power usage drops significantly while in Ready/Sleep mode, which saves natural resources and saves money without affecting the high performance of this product. To determine the ENERGY STAR® qualification status for this product see the Product Data Sheet or Specifications Sheet. Qualified products are also listed at:

http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html

Toner consumption

EconoMode uses less toner, which might extend the life of the print cartridge.

Paper use

This product's duplex feature (two-sided printing) and N-up printing (multiple pages printed on one page) capability can reduce paper usage and the resulting demands on natural resources.

Plastics

Plastic parts over 25 grams are marked according to international standards that enhance the ability to identify plastics for recycling purposes at the end of the product's life.

HP LaserJet print supplies

It's easy to return and recycle your empty HP LaserJet print cartridges—free of charge—with HP Planet Partners. Multilingual program information and instructions are included in every new HP LaserJet print cartridge and supplies package. You help reduce the toll on the environment further when you return multiple cartridges together rather than separately.

HP is committed to providing inventive, high-quality products and services that are environmentally sound, from product design and manufacturing to distribution, customer use and recycling. When you participate in the HP Planet Partners program, we ensure your HP LaserJet print cartridges are recycled properly, processing them to recover plastics and metals for new products and diverting millions of tons of waste from landfills. Since this cartridge is being recycled and used in new materials, it will not be returned to you. Thank you for being environmentally responsible!

NOTE: Use the return label to return original HP LaserJet print cartridges only. Please do not use this label for HP inkjet cartridges, non-HP cartridges, refilled or remanufactured cartridges or warranty returns. For information about recycling your HP inkjet cartridges please go to http://www.hp.com/recycle.

Return and recycling instructions

United States and Puerto Rico

The enclosed label in the HP LaserJet toner cartridge box is for the return and recycling of one or more HP LaserJet print cartridges after use. Please follow the applicable instructions below.

Multiple returns (two to eight cartridges)

1. Package each HP LaserJet print cartridge in its original box and bag.
2. Tape up to eight single boxes together using strapping or packaging tape (up to 70 lbs).
3. Use a single pre-paid shipping label.

OR

1. Use your own suitable box, or request a free bulk collection box from the http://www.hp.com/recycle or 1-800-340-2445 (holds up to eight HP LaserJet print cartridges).
2. Use a single pre-paid shipping label.

Single returns

1. Package the HP LaserJet print cartridge in its original bag and box.
2. Place the shipping label on the front of the box.

Shipping

For all HP LaserJet print cartridge recycling returns, give the package to UPS during your next delivery or pickup, or take it to an authorized UPS drop-off center. For the location of your local UPS drop-off center, call 1-800-PICKUPS or visit http://www.ups.com. If you are returning via USPS label, give the

package to a U.S. Postal Service carrier or drop off at a U.S.Postal Service Office. For more information, or to order additional labels or boxes for bulk returns, visit http://www.hp.com/recycle or call 1-800-340-2445. Requested UPS pickup will be charged normal pickup rates. Information subject to change without notice.

Non-US returns

To participate in HP Planet Partners return and recycling program, just follow the simple directions in the recycling guide (found inside the packaging of your new printer supply item) or visit http://www.hp.com/recycle. Select your country/region for information on how to return your HP LaserJet printing supplies.

Paper

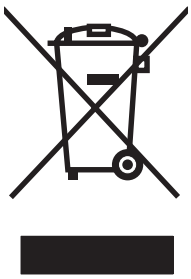
This product is capable of using recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Print Media Guide*. This product is suitable for the use of recycled paper according to EN12281:2002.

Material restrictions

This HP product does not contain added mercury.

This HP product does not contain a battery.

Disposal of waste equipment by users in private households in the European Union



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Material Safety Data Sheet (MSDS)

Material Safety Data Sheets (MSDS) for supplies containing chemical substances (for example, toner) can be obtained by contacting the HP Web site at www.hp.com/go/msds or www.hp.com/hpinfo/globalcitizenship/environment.

For more information

To obtain information about these environmental topics:

- Product environmental profile sheet for this and many related HP products
- HP's commitment to the environment
- HP's environmental management system

- HP’s end-of-life product return and recycling program
- Material Safety Data Sheets

Visit www.hp.com/go/environment or www.hp.com/hpinfo/globalcitizenship/environment/index.html.

Declaration of conformity

Declaration of Conformity
according to ISO/IEC 17050-1 and EN 17050-1

Manufacturer's Name:	Hewlett-Packard Company	DoC#: BOISB-0604-03-rel.1.0
Manufacturer's Address:	11311 Chinden Boulevard, Boise, Idaho 83714-1021, USA	

declares, that the product

Product Name:	HP LaserJet M1120 Series
Regulatory Model Number[2)]	BOISB-0604-03
Product Options:	ALL
Print Cartridges:	CB436A

conforms to the following Product Specifications:

SAFETY:	IEC 60950-1:2001 / EN60950-1: 2001 +A11 IEC 60825-1:1993 +A1 +A2 / EN 60825-1:1994 +A1 +A2 (Class 1 Laser/LED Product) GB4943-2001
EMC:	CISPR22:2005 / EN55022:2006 – Class B[1)] EN 61000-3-2:2000 +A2 EN 61000-3-3:1995 +A1 EN 55024:1998 +A1 +A2 FCC Title 47 CFR, Part 15 Class B / ICES-003, Issue 4 GB9254-1998, GB17625.1-2003

Supplementary Information:

The product herewith complies with the requirements of the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC and carries the CE-Marking CE accordingly.

This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two Conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

1) The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.

2) For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the product name or the product number(s).

Boise, Idaho , USA

August 2007

For regulatory topics only:

European Contact:	Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe,, Herrenberger Strasse 140, , D-71034, Böblingen, (FAX: +49-7031-14-3143), http://www.hp.com/go/certificates
USA Contact:	Product Regulations Manager, Hewlett-Packard Company,, PO Box 15, Mail Stop 160, Boise, ID 83707-0015, , (Phone: 208-396-6000)

Safety statements

Laser safety

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. The device is certified as a “Class 1” laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Since radiation emitted inside the device is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

⚠ **WARNING!** Using controls, making adjustments, or performing procedures other than those specified in this guide may result in exposure to hazardous radiation.

Canadian DOC regulations

Complies with Canadian EMC Class B requirements.

« Conforme à la classe B des normes canadiennes de compatibilité électromagnétiques. « CEM ». »

EMI statement (Korea)

B급 기기 (가정용 정보통신기기)

이 기기는 가정용으로 전자파적합등록을 한 기기로서
주거지역에서는 물론 모든지역에서 사용할 수 있습니다.

Laser statement for Finland

Luokan 1 laserlaite

Klass 1 Laser Apparat

HP LaserJet M1120, M1120n, laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle. Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (1994) mukaisesti.

VAROITUS !

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING !

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

HUOLTO

HP LaserJet M1120, M1120n - kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

VARO !

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömällelasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

VARNING !

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsättas användaren för osynlig laserstrålning. Betrakta ej strålen. Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista: Aallonpituus 775-795 nm Teho 5 m W Luokan 3B laser.

Substances table (China)

根据中国电子信息产品污染控制管理办法的要求而出台

Table C-1 有毒有害物质表

部件名称	有毒有害物质和元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
打印引擎	X	O	X	X	O	O
复印机组件	X	O	O	O	O	O
控制面板	O	O	O	O	O	O
塑料外壳	O	O	O	O	O	O
格式化板组件	X	O	O	O	O	O
碳粉盒	X	O	O	O	O	O

O:表示在此部件所用的所有同类材料中，所含的此有毒或有害物质均低于 SJ/T11363-2006 的限制要求。

X:表示在此部件所用的所有同类材料中，至少一种所含的此有毒或有害物质高于 SJ/T11363-2006 的限制要求。

NOTE: 引用的“环保使用期限”是根据在正常温度和湿度条件下操作使用产品而确定的。

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